GROUP 27

REAR AXLE

CONTENTS

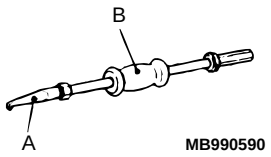
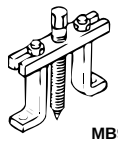
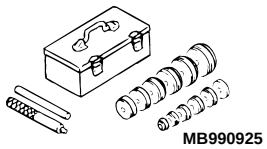
GENERAL DESCRIPTION

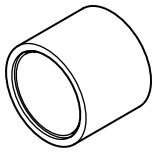
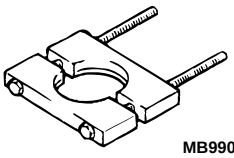
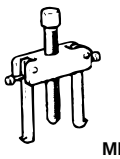
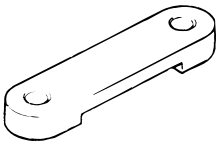
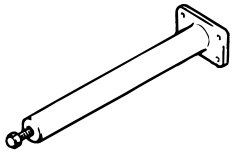
M1271000100188

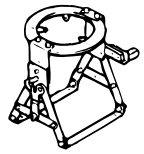
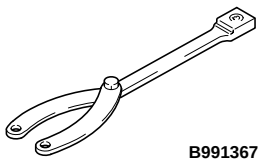
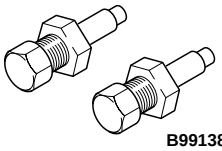
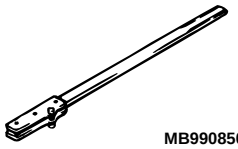
- The rear axle is a banjo-type semi-floating type. As the axle shaft bearings, single taper roller bearings and double taper roller bearings are used. ABS rotor is press-fitted to the axle shaft retainer ring.
- The hybrid type LSD, which has superior off-road driving performance, is offered as an option.

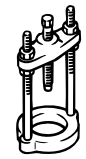
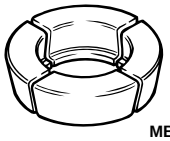
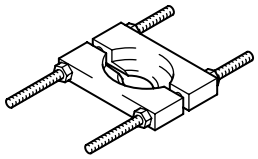
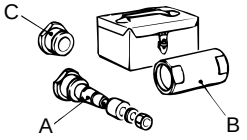
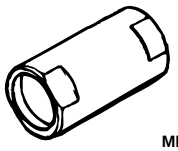
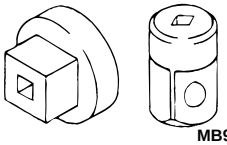
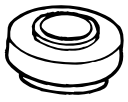
SPECIAL TOOLS

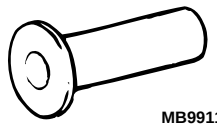
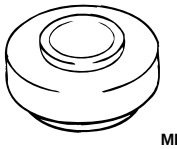
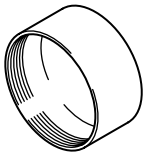
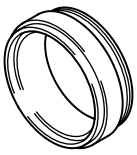
M1271000600268

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
	MB990590 Rear axle shaft oil seal remover A: MB990212 Adapter B: MB990211 Sliding hammer	–	• Removal of axle shaft (use together with MB990241, MB990211) • Removal of axle housing oil seal
	MB990241 Rear axle shaft puller	MB990241-01 or General service tool	Removal of axle shaft (use together with MB990211)
	MB990925 Bearing and oil seal installer set A: MB990926 – MB990937 Installer adapter B: MB990938 Bar C: MB990939 Brass bar	MB990925-01 or General service tool	• Installation of axle housing oil seal MB990930, MB990938 • Press-fitting of bearing outer race MB990937, MB990938 • Press fitting of oil seal <vehicles with drum brakes (Vehicles without ABS except 6G74)> MB990934, MB990938 <Vehicles with disc brakes (6G74 and vehicles with ABS)> MB990936, MB990938 • Press-fitting of drive pinion rear bearing outer race <6G72> MB990937, MB990938 • Press-fitting of drive pinion front bearing outer race MB990934, MB990938 For details of each installer, refer to GROUP 26 – Special Tools P.26-8.

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
	MB991445 Bushing remover and installer base	–	Press-fitting of the drive pinion rear bearing outer race <6G74> (Use together with MB990938)
 MB991522	MB991552 Axle shaft bearing and case remover	–	Removal of the axle shaft bearing and bearing case
 MB990560	MB990560 Bearing remover	MD998348-01	Removal of bearing inner race
 MB990801	MB990801 Rear axle bearing outer race remover	–	Removal of bearing case, bearing outer race
 MB990786	MB990786 Rear axle bearing outer race bridge	–	Removal of bearing case, bearing outer race
 MB990799	MB990799 Bearing inner race installer	MB990799-01	Removal of bearing case, bearing outer race Press-fitting of bearing inner race Press-fitting of retainer
 MB990890	MB990890 or MB990891 Rear suspension bushing base	MB990890-01	Press-fitting of bearing outer race
 MB990787	MB990787 Axle shaft bearing remover	MB990787-01	Installation of rotor

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
 MB990909	MB990909 Working base	–	Supporting of the differential carrier
 B991367	MB991367 Special spanner	–	Removal and adjustment of the side bearing nut
 B991385	MB991385 Pin	–	
 MB990810	MB990810 Side bearing puller	MB990810-01	Removal of the side bearing inner race
 MB990811	MB990811 Side bearing cup	MB990811-01	
 MB991407	MB991407 Differential rear support arbor	–	
 MB990850	MB990850 End yoke holder	–	Removal of the companion flange

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
 MB990339	MB990339 Bearing puller	MB990339-01	Removal of the drive pinion rear bearing inner race
 MB990648	MB990648 Bearing remover	MB990648-01	
	MD998801 Bearing remover	–	
 MB991171	MB991171 Pinion height gauge set A: MB990819 Drive pinion gauge B: MB991170 Cylinder gauge C: MB991169 Drive pinion gauge attachment	–	Measurement of the pinion height
 MB991534	MB991534 Cylinder gauge	–	
 MB990326	MB990326 Preload socket	General service tool	Wheel bearing turning torque measurement
	MB990685 Torque wrench	–	Measurement of drive pinion turning torque
 MB990728	MB990728 Bearing installer	–	Press-fitting of the drive pinion rear bearing inner race

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
 MB991168	MB991168 Drive pinion oil seal installer	–	Press-fitting of the drive pinion oil seal
 MB990802	MB990802 Bearing installer	MB990802-01	• Press-fitting of the side bearing inner race • Press-fitting of the drive pinion rear bearing inner race
	MD998812 Installer cap	–	Press-fitting of the side bearing inner race
	MD998829 Installer adapter	–	

REAR AXLE DIAGNOSIS

INTRODUCTION

M1271004100191

Noise from the drive shaft or differential may be caused by defects in the components.

TROUBLESHOOTING STRATEGY

M1271004200198

Use these steps to plan your diagnostic strategy. If you follow them carefully, you will be sure that you have exhausted most of the possible ways to find a rear axle fault.

1. Gather information from the customer.
2. Verify that the condition described by the customer exists.
3. Find the malfunction by following the Symptom Chart.
4. Verify that the malfunction is eliminated.

SYMPTOM CHART

M1271004300195

SYMPTOM		INSPECTION PROCEDURE	REFERENCE PAGE
Axle shaft, axle housing	Noise while wheels are rotating	1	P.27-7
	Grease leakage	2	P.27-8

SYMPTOM		INSPECTION PROCEDURE	REFERENCE PAGE
Differential (Conventional differential)	Constant noise	3	P.27-8
	Gear noise while driving	4	P.27-10
	Gear noise while coasting	5	P.27-11
	Bearing noise while driving or coasting	6	P.27-11
	Noise while turning	7	P.27-11
	Heat	8	P.27-12
	Oil leakage	9	P.27-12
Differential (Limited-slip differential)	Abnormal noise during driving or shifting	10	P.27-13
	Abnormal noise when cornering	11	P.27-14
	Gear noise	12	P.27-15
	Gear oil leakage	13	P.27-16
	Seizure	14	P.27-17
	Breakdown	15	P.27-18
	Limited slip differential does not function (on snow, mud, ice, etc.).	16	P.27-18

SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: Noise while Wheels are Rotating

DIAGNOSIS

STEP 1. Check whether the axle shaft is bent.

Q: Is the axle shaft bent?
YES : Replace the part. Then go to Step 3.
NO : Go to Step 2.

STEP 2. Check the axle shaft bearing for wear or damage.

Q: Is the axle shaft bearing damaged or worn?
YES : Replace the part. Then go to Step 3.
NO : Go to Step 3.

STEP 3. Retest the system.

Q: Is the abnormal noise eliminated?
YES : The procedure is complete.
NO : Start over at Step 1.

INSPECTION PROCEDURE 2: Grease Leakage

DIAGNOSIS

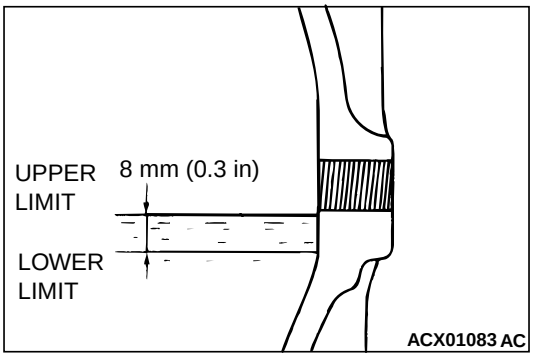
STEP 1. Check the oil seal for wear or damage, and the bearing seal for defects.

Q: Is the oil seal worn, damaged or faulty and the bearing seal for defects?
YES : Replace the part and apply grease (Refer to P.27-25 or P.27-36.). Then go to Step 2.
NO : Go to Step 2.

STEP 2. Retest the system.

Q: Is there grease leakage?
YES : Start over at Step 1.
NO : The procedure is complete.

INSPECTION PROCEDURE 3: Constant Noise <Conventional Differential>



DIAGNOSIS

STEP 1. Check the oil level.
Remove the filler plug and check the gear oil level.

Q: Is the gear oil level more than 8 mm (0.3 inch) below the bottom of the filler plug hole?
YES : Check the oil leakage from differential carrier, and repair if necessary. Then refill Hypoid gear oil API classification GL-5 or higher, SAE viscosity Number 90, 80W. Then go to Step 9.
NO : Go to Step 2.

STEP 2. Check the tooth contact (engagement) of the drive gear and drive pinion. Refer to GROUP 26, Differential Carrier – Inspection Before Disassembly P.26-38.

Q: Is the tooth contact (engagement) of the drive gear and drive pinion correct?
YES : Go to Step 3.
NO : Adjust or replace the part. Then go to Step 9.

STEP 3. Check the side bearing for looseness, wear or damage.

Q: Is the side bearing loosened, worn or damaged?
YES : Adjust or replace the part. Then go to Step 9.
NO : Go to Step 4.

STEP 4. Check the drive pinion bearing for wear or damage.

Q: Is the drive pinion bearing worn or damaged?

YES : Adjust or replace the part. Then go to Step 9.
NO : Go to Step 5.

STEP 5. Check the drive gear and drive pinion for wear.

Q: Is the drive gear or drive pinion worn?

YES : Replace the part. Then go to Step 9.
NO : Go to Step 6.

STEP 6. Check the side gear thrust washer or pinion shaft for wear.

Q: Is the side gear thrust washer or pinion shaft worn?

YES : Replace the part. Then go to Step 9.
NO : Go to Step 7.

STEP 7. Check the drive gear and differential case for strain, and the gear for damage.

Q: Is the drive gear or differential case strained or damaged?

YES : Replace the part. Then go to Step 9.
NO : Go to Step 8.

STEP 8. Check for the engagement of foreign material.

Q: Is the foreign material found?

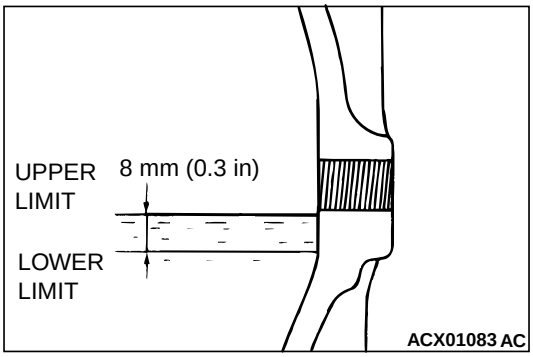
YES : Remove the foreign material and then inspect. If necessary, replace the part. Then go to Step 9.
NO : Go to Step 9.

STEP 9. Retest the system.

Q: Is the abnormal noise eliminated?

YES : The procedure is complete.
NO : Start over at Step 1.

INSPECTION PROCEDURE 4: Gear Noise while Driving <Conventional Differential>



DIAGNOSIS

STEP 1. Check the oil level.

Remove the filler plug and check the gear oil level.

Q: Is the gear oil level more than 8 mm (0.3 inch) below the bottom of the filler plug hole?

YES : Check the oil leakage from differential carrier, and repair if necessary. Then refill Hypoid gear oil API classification GL-5 or higher, SAE viscosity Number 90, 80W. Then go to Step 6.

NO : Go to Step 2.

STEP 2. Check the gear engagement.

Q: Is the gear engagement in good condition?

YES : Go to Step 3.

NO : Adjust or replace the part. Then go to Step 6.

STEP 3. Check the drive pinion turning torque.

Q: Is the drive pinion turning torque correct?

YES : Go to Step 4.

NO : Adjust the turning torque. Then go to Step 6.

STEP 4. Check the gear for damage.

Q: Is the gear damaged?

YES : Replace the gear. Then go to Step 6.

NO : Go to Step 5.

STEP 5. Check for foreign material.

Q: Is foreign material found?

YES : Remove the foreign material and then inspect. If necessary, replace the part. Then go to Step 6.

NO : Go to Step 6.

STEP 6. Retest the system.

Q: Is the abnormal noise eliminated?

YES : The procedure is complete.

NO : Start over at Step 1.

INSPECTION PROCEDURE 5: Gear Noise while Coasting <Conventional Differential>

DIAGNOSIS

STEP 1. Check the drive pinion turning torque.

Q: Is the drive pinion turning torque correct?
YES : Go to Step 2.
NO : Adjust the turning torque. Then go to Step 3.

STEP 2. Check the gear for damage.

Q: Is the gear damaged?
YES : Replace the gear. Then go to Step 3.
NO : Go to Step 3.

STEP 3. Retest the system.

Q: Is the abnormal noise eliminated?
YES : The procedure is complete.
NO : Start over at Step 1.

INSPECTION PROCEDURE 6: Bearing Noise while Driving or Coasting <Conventional Differential>

DIAGNOSIS

STEP 1. Check the drive pinion rear bearing for cracks or damage.

Q: Is the drive pinion rear bearing cracked or damaged?
YES : Replace the part. Then go to Step 2.
NO : Go to Step 2.

STEP 2. Retest the system.

Q: Is the abnormal noise eliminated?
YES : The procedure is complete.
NO : Start over at Step 1.

INSPECTION PROCEDURE 7: Noise while Turning <Conventional Differential>

DIAGNOSIS

STEP 1. Check the side bearing for wear or damage.

Q: Is the side bearing worn or damaged?
YES : Replace the part. Then go to Step 3.
NO : Go to Step 2.

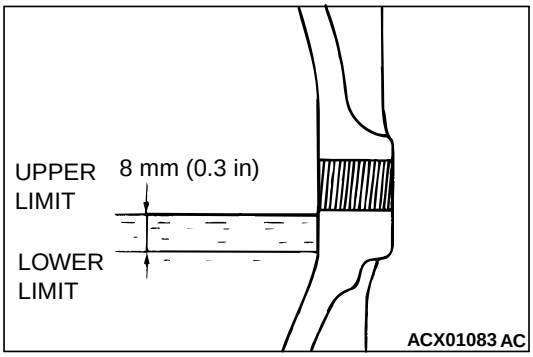
STEP 2. Check the side gear, pinion gear or pinion shaft for damage.

Q: Is the side gear, pinion gear or pinion shaft damaged?
YES : Replace the part. Then go to Step 3.
NO : Go to Step 3.

STEP 3. Retest the system.

Q: Is the abnormal noise eliminated?
YES : The procedure is complete.
NO : Start over at Step 1.

INSPECTION PROCEDURE 8: Heat <Conventional Differential>



DIAGNOSIS

STEP 1. Check the oil level.
Remove the filler plug and check the gear oil level.

Q: Is the gear oil level more than 8 mm (0.3 inch) below the bottom of the filler plug hole?

YES : Check the oil leakage from differential carrier, and repair if necessary. Then refill Hypoid gear oil API classification GL-5 or higher, SAE viscosity Number 90, 80W. Then go to Step 3.
NO : Go to Step 2.

STEP 2. Check the gear backlash (excessive). Refer to GROUP 26, Differential Carrier – Inspection Before Disassembly P.26-38.

Q: Is the gear backlash correct?

YES : Go to Step 3.
NO : Adjust the backlash. Then go to Step 3.

STEP 3. Retest the system.

Q: Is the heat eliminated?

YES : The procedure is complete.
NO : Start over at Step 1.

INSPECTION PROCEDURE 9: Oil Leakage <Conventional Differential>

DIAGNOSIS

STEP 1. Check the breather hose for clogging.

Q: Is the breather hose clogged?

YES : Clean or replace the part. Then go to Step 5.
NO : Go to Step 2.

STEP 2. Check the cover installation.

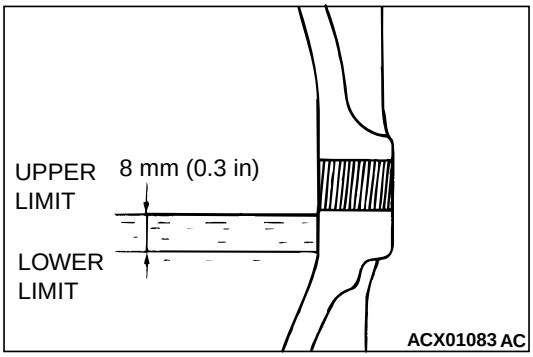
Q: Is the cover installed correctly?

YES : Go to Step 3.
NO : Repair. Then go to Step 5.

STEP 3. Check the oil seal for wear or damaged.

Q: Is the oil seal worn or damaged?

YES : Replace the seal. Then go to Step 5.
NO : Go to Step 4.



STEP 4. Check the oil level.

Remove the filler plug and check the gear oil level.

Q: Is the gear oil level more than 8 mm (0.3 inch) below the bottom of the filler plug hole?

YES : Refill Hypoid gear oil API classification GL-5 or higher, SAE viscosity Number 90, 80W. Then go to Step 5.

NO : Go to Step 5.

STEP 5. Retest the system.

Q: Is there oil leakage?

YES : Start over at Step 1.

NO : The procedure is complete.

INSPECTION PROCEDURE 10: Abnormal Noise during Driving or Shifting <Limited-Slip Differential>

NOTE: In addition to a malfunction of the differential carrier components, abnormal noise can also be caused by the universal joint of the propeller shaft, the drive shafts, the wheel bearings, etc. Before disassembling any parts, take all possibilities into consideration and confirm the source of the noise.

DIAGNOSIS

STEP 1. Check for looseness in the companion flange tightening nut.

Q: Is there looseness in the companion flange tightening nut?

YES : Tighten to 216 N·m (159 ft-lb). Then go to Step 3.

NO : Go to Step 2.

STEP 2. Check the drive gear backlash (excessive).

Q: Is the gear backlash correct?

YES : Go to Step 3.

NO : Adjust the backlash. Then go to Step 3.

STEP 3. Retest the system.

Q: Is the abnormal noise eliminated?

YES : The procedure is complete.

NO : Start over at Step 1.

INSPECTION PROCEDURE 11: Abnormal Noise when Cornering <Limited-Slip Differential>

DIAGNOSIS

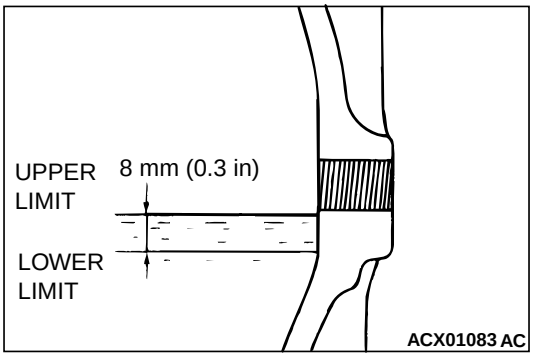
STEP 1. Check that Hypoid gear oil MITSUBISHI Genuine Gear Oil Part No.8149630 EX or equivalent is being used.

Q: Is the Hypoid gear oil MITSUBISHI Genuine Gear Oil Part No.8149630 EX or equivalent being used?

YES : Go to Step 2.
NO : Replace the oil. Then go to Step 4.

STEP 2. Check the oil level.

Remove the filler plug and check the gear oil level.



Q: Is the gear oil level more than 8 mm (0.3 inch) below the bottom of the filler plug hole?

YES : Check the oil leakage from differential carrier, and repair if necessary. Then refill Hypoid gear oil MITSUBISHI Genuine Gear Oil Part No.8149630 EX or equivalent. Then go to Step 4.
NO : Go to Step 3.

STEP 3. Check the limited slip differential case assembly for damage.

Q: Is the limited slip differential case assembly damaged?

YES : Replace the part. Then go to Step 4.
NO : Go to Step 4.

STEP 4. Retest the system.

Q: Is the abnormal noise eliminated?

YES : The procedure is complete.
NO : Start over at Step 1.

INSPECTION PROCEDURE 12: Gear Noise <Limited-Slip Differential>

NOTE: Noise from the engine, muffler vibration, transmission, propeller shaft, wheel bearings, tires, body, etc., is easily mistaken as being caused by malfunction in the differential carrier components. Be extremely careful and attentive when test driving, etc.

Test methods to confirm the source of the abnormal noise include: coasting, acceleration, constant speed driving, raising the rear wheels, etc. Use the method most appropriate to the circumstances.

DIAGNOSIS

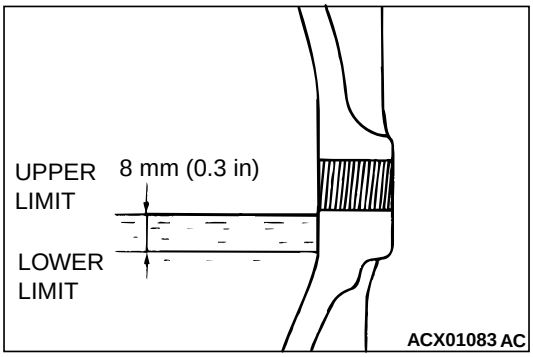
STEP 1. Check that Hypoid gear oil MITSUBISHI Genuine Gear Oil Part No.8149630 EX or equivalent is being used.

Q: Is the Hypoid gear oil MITSUBISHI Genuine Gear Oil Part No.8149630 EX or equivalent being used?

YES : Go to Step 2.
NO : Replace the oil. Then go to Step 9.

STEP 2. Check the oil level.

Remove the filler plug and check the gear oil level.



Q: Is the gear oil level more than 8 mm (0.3 inch) below the bottom of the filler plug hole?

YES : Check the oil leakage from differential carrier, and repair if necessary. Then refill Hypoid gear oil MITSUBISHI Genuine Gear Oil Part No.8149630 EX or equivalent. Then go to Step 9.
NO : Go to Step 3.

STEP 3. Check the tooth contact (engagement) of the drive gear. Refer to GROUP 26, Differential Carrier – Inspection Before Disassembly P.26-38.

Q: Is the tooth contact (engagement) of the drive gear correct?

YES : Go to Step 4.
NO : Adjust or replace the part. Then go to Step 9.

STEP 4. Check the drive gear backlash.

Q: Is the drive gear backlash correct?

YES : Go to Step 5.
NO : Adjust the backlash. Then go to Step 9.

STEP 5. Check the drive pinion turning torque.

Q: Is the drive pinion turning torque correct?

YES : Go to Step 6.
NO : Adjust the turning torque. Then go to Step 9.

STEP 6. Check the drive gear and drive pinion for tooth damage or breakage.

Q: Are the drive gear and drive pinion for tooth damaged?

YES : Replace the part. Then go to Step 9.
NO : Go to Step 7.

STEP 7. Check the drive pinion bearing and side bearing for seizure, damage or breakage.

Q: Are the drive pinion bearing and side bearing damaged?

YES : Replace the part. Then go to Step 9.
NO : Go to Step 8.

STEP 8. Check the limited slip differential case assembly for damage.

Q: Is the limited slip differential case assembly damaged?

YES : Replace the part. Then go to Step 9.
NO : Go to Step 9.

STEP 9. Retest the system.

Q: Is the gear noise eliminated?

YES : The procedure is complete.
NO : Start over at Step 1.

INSPECTION PROCEDURE 13: Gear Oil Leakage <Limited-Slip Differential>

DIAGNOSIS

STEP 1. Check for looseness in the filler or drain plug.

Q: Is the filler or drain plug loose?

YES : Tighten the filler plug to 49 N·m (36 ft-lb) or tighten the drain plug to 59 N·m (44 ft-lb). Then go to Step 5.
NO : Go to Step 2.

STEP 2. Check the breather hose for clogging or damage.

Q: Is the breather hose clogged or damaged?

YES : Clean or replace the part. Then go to Step 5.
NO : Go to Step 3.

STEP 3. Check for looseness in the companion flange tightening nut.

Q: Is the companion flange tightening nut loose?

YES : Tighten to 216 N·m (159 ft-lb). Then go to Step 5.
NO : Go to Step 4.

STEP 4. Check the oil seal for wear, damage or foreign material.

Q: Is the oil seal worn, damaged or does it contain foreign material?

YES : Replace the seal. Then go to Step 5.
NO : Go to Step 5.

STEP 5. Retest the system.

Q: Is there oil leakage?

YES : Start over at Step 1.
NO : The procedure is complete.

INSPECTION PROCEDURE 14: Seizure <Limited-Slip Differential>

NOTE: In the event of seizure, disassemble and replace the parts involved. Be sure to check all components for any irregularities and repair or replace as necessary.

DIAGNOSIS

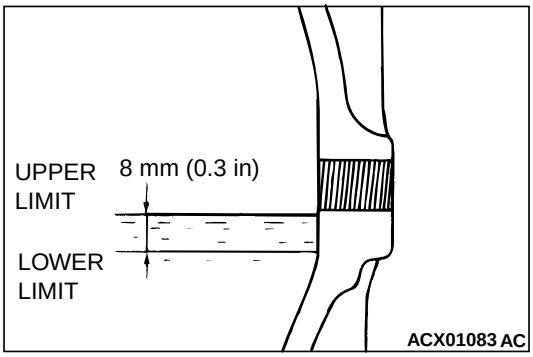
STEP 1. Check that Hypoid gear oil MITSUBISHI Genuine Gear Oil Part No.8149630 EX or equivalent is being used.

Q: Is Hypoid gear oil MITSUBISHI Genuine Gear Oil Part No.8149630 EX or equivalent being used?

YES : Go to Step 2.
NO : Replace the oil. Then go to Step 6.

STEP 2. Check the oil level.

Remove the filler plug and check the gear oil level.



Q: Is the gear oil level more than 8 mm (0.3 inch) below the bottom of the filler plug hole?

YES : Check the oil leakage from differential carrier, and repair if necessary. Then refill with Hypoid gear oil MITSUBISHI Genuine Gear Oil Part No.8149630 EX or equivalent. Then go to Step 6.
NO : Go to Step 3.

STEP 3. Check the drive gear backlash (low).

Q: Is the drive gear backlash correct?

YES : Go to Step 4.
NO : Adjust the backlash. Then go to Step 6.

STEP 4. Check the drive pinion turning torque (excessive).

Q: Is the drive pinion turning torque correct?

YES : Go to Step 5.
NO : Adjust it. Then go to Step 6.

STEP 5. Check the side bearing preload (excessive).

Q: Are the side bearing cap mounting bolts tightened to 69 – 78 N·m (51- 58 ft-lb)?

YES : Go to Step 6.
NO : Tighten them to 69 – 78 N·m (51 – 58 ft-lb). Then go to Step 6.

STEP 6. Retest the system.

Q: Does the seizure still occur?

YES : Start over at Step 1.
NO : The procedure is complete.

INSPECTION PROCEDURE 15: Breakdown <Limited-Slip Differential>

NOTE: In addition to disassembling and replacing the failed parts, be sure to check all components for irregularities and repair or replace as necessary.

DIAGNOSIS

STEP 1. Check for looseness of the drive gear tightening bolt.

Q: Are the drive gear tightening bolts loose?
YES : Tighten to 78 – 88 N·m (58 – 65 ft-lb) <6G72>, 137 – 167 N·m (101 – 123 ft-lb) <6G74 or Limited Slip Differential> and apply 3M™ AAD part NO.8730 or AAD part NO.8731 or equivalent. Then go to Step 5.
NO : Go to Step 2.

STEP 2. Check the drive gear backlash. Refer to GROUP 26, Differential Carrier – Inspection Before Disassembly P.26-38 and refer to P.27-44.

Q: Is the drive gear backlash correct?
YES : Go to Step 3.
NO : Adjust the backlash. Then go to Step 5.

STEP 3. Check the drive pinion turning torque (low). Refer to P.27-49.

Q: Is the drive pinion turning torque correct?
YES : Go to Step 4.
NO : Adjust it. Then go to Step 5.

STEP 4. Check the side bearing preload (low).

Q: Are the side bearing cap mounting bolts tightened to 69 – 78 N·m (51 – 58 ft-lb)?
YES : Go to Step 5.
NO : Tighten them to 69 – 78 N·m (51 – 58 ft-lb). Then go to Step 5.

STEP 5. Retest the system.

Q: Is there damage?
YES : Start over at Step 1.
NO : The procedure is complete.

INSPECTION PROCEDURE 16: Limited Slip Differential does not Function (On Snow, Mud, Ice, etc.) <Limited-Slip Differential>

DIAGNOSIS

STEP 1. Check the limited slip device for damage.

Q: Is the limited slip device damaged?
YES : Replace the damaged part. Then go to Step 2.
NO : Go to Step 2.

STEP 2. Retest the system.

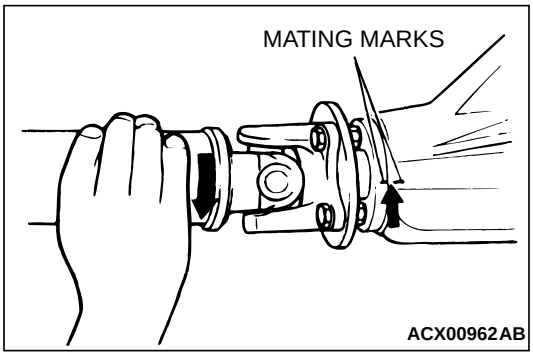
Q: Does the limited slip differential function?
YES : The procedure is complete.
NO : Start over at Step 1.

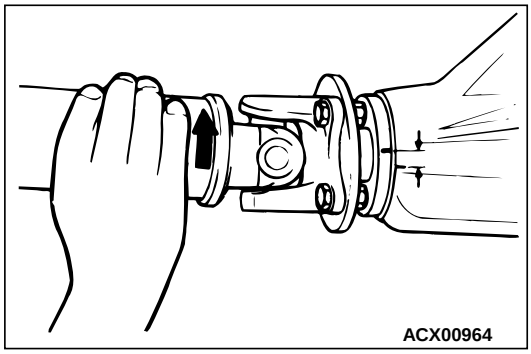
ON-VEHICLE SERVICE

REAR AXLE TOTAL BACKLASH CHECK

M1271001200122

1. Park the vehicle on a flat, level surface.
2. Move the transmission control lever to the neutral position. Apply the parking brake. Raise the vehicle on a jack.
3. Turn the companion flange clockwise as far as it will go. Make the mating mark on the dust cover of the companion flange and on the differential carrier.





4. Turn the companion flange counterclockwise as far as it will go, and measure the amount of distance the mating marks moved.

   Limit: 5 mm (0.2 inch)

5. If the backlash exceeds the limit value, remove the differential carrier assembly and check the following.
   - Final drive gear backlash
   - Differential gear backlash

AXLE SHAFT END PLAY CHECK

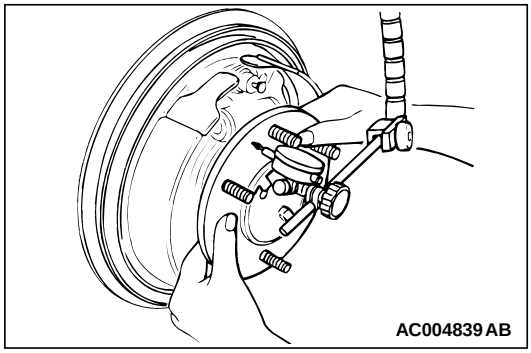
M1271001300066

1. Measure the axle shaft end play by using a dial indicator.

   Standard value:

   Vehicles with drum brakes (Vehicles without ABS except 6G74): 0.05 – 0.20 mm (0.002 – 0.008 inch) Vehicles with disc brakes or vehicles with drum brakes (6G74 and vehicles with ABS): 0 – 0.25 mm (0 – 0.010 inch)

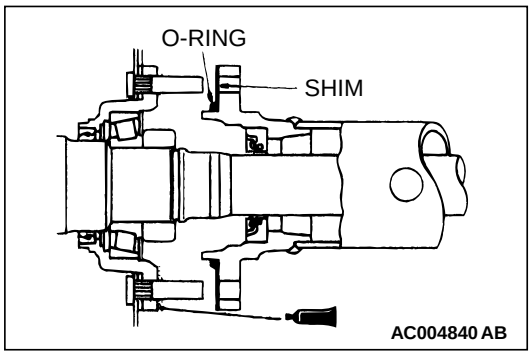
2. If within specifications, return vehicles to original condition. If not within specifications, refer to AXLE SHAFT END PLAY ADJUSTMENT P.27-20.



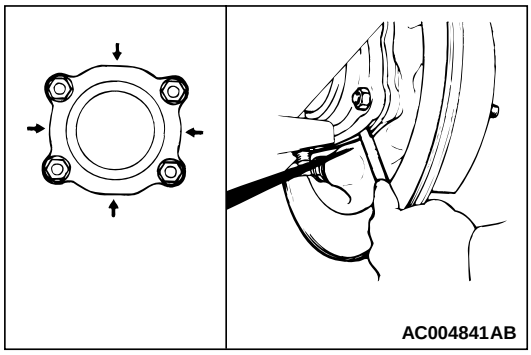
AXLE SHAFT END PLAY ADJUSTMENT

M1271001400063

<Vehicles with drum brakes (Vehicles without ABS except 6G74)>



1. Remove axle shaft. (Refer to P.27-25.)
2. Insert a 1 mm (0.04 inch) thick shim and O-ring into the left side rear axle housing.
3. Apply 3M™ AAD Part Number 8672, 8679, 8678, 8661, 8663 or equivalent to the mating surface of the bearing case. Install the left axle shaft into the rear axle housing and tighten the nuts to 49 – 59 N·m (36 – 44 ft-lb).
4. Temporarily install the right axle shaft assembly to the rear axle housing without installing the O-ring or shim.



5. Measure the clearance between the bearing case and rear axle housing end with a feeler gauge.

   NOTE: Confirm that the measurement values do not differ in the horizontal and vertical positions.
6. Select shims of the thickness which is equal to the sum of the measured clearance and 0.05 – 0.20 mm (0.002 – 0.008 inch).

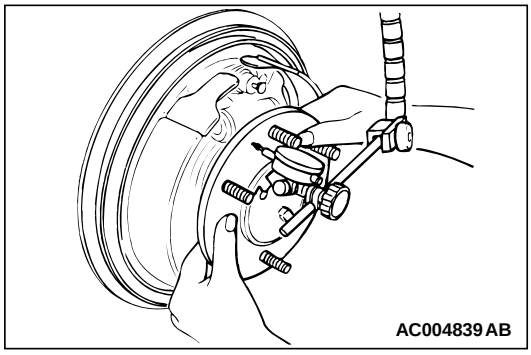
   Example:

   Clearance 1.0 mm (0.04 inch)

   Standard value 0.05 – 0.20 mm (0.002 – 0.008 inch)

   Shim thickness 1.05 – 1.20 mm (0.041 – 0.047 inch)
7. Remove the right axle shaft, and install shim(s) and O-ring on the right side rear axle housing end.
8. Apply 3M™ AAD Part Number 8672, 8679, 8678, 8661, 8663 or equivalent to the mating surface of bearing case. Install the right axle shaft into rear axle housing and tighten the nut to 49 – 59 N·m (36 – 44 ft-lb).
9. Check that the axle shaft end play is within the standard value.

   Standard value: 0.05 – 0.20 mm (0.002 – 0.008 inch)



<Vehicles with disc brakes or vehicles with drum brakes (6G74 and vehicles with ABS)>

The axle shaft end play is preset at factory. It can not be adjusted.

GEAR OIL LEVEL CHECK

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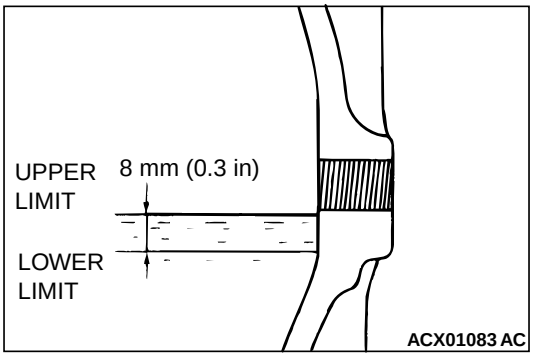


Check that gear oil level is not 8 mm (0.3 inch) below the bottom of filler plug hole.

Specified gear oil:

<Conventional differential, differential with rear differential lock> Hypoid gear oil API classification GL-5 or higher SAE viscosity Number 90, 80W

<Limited slip differential> Hypoid gear oil MITSUBISHI Genuine Gear Oil Part Number 8149630 EX or equivalent

AXLE ASSEMBLY

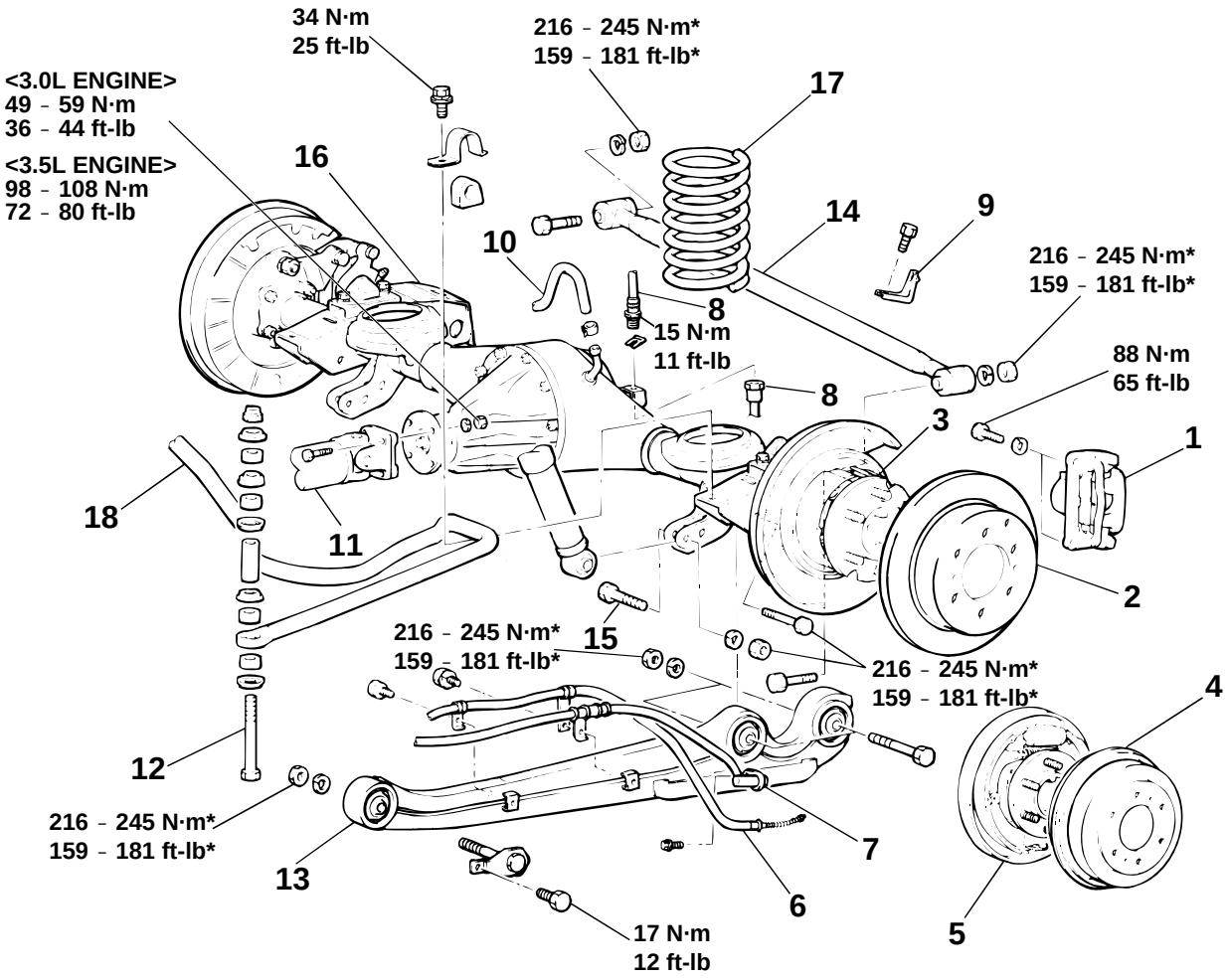
REMOVAL AND INSTALLATION

M1271001700127

⚠ CAUTION

***: Indicates parts which should be temporarily tightened, and then fully tightened with the vehicle on the ground in an unladen condition.**

Pre-removal Operation	Post-installation Operation
• Brake Fluid Draining	• Brake Fluid Filling and Air Bleeding (Refer to GROUP 35A, On-vehicle Service P.35A-22.) • Parking Brake Lever Stroke Adjustment (Refer to GROUP 36, On-vehicle Service P.36-2.)



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REMOVAL STEPS

<<A>>
1. CALIPER ASSEMBLY <VEHICLES WITH DISC BRAKES>
2. BRAKE DISC <VEHICLES WITH DISC BRAKES>
3. PARKING BRAKE SHOE ASSEMBLY (REFER TO GROUP 36, PARKING BRAKE DRUM P.36-7.) <VEHICLE WITH DISC BRAKES>
4. BRAKE DRUM <VEHICLES WITH DRUM BRAKES>

REMOVAL STEPS (Continued)

5. SHOE AND LINING ASSEMBLY (REFER TO GROUP 35A, REAR DRUM BRAKE P.35A-48.)
6. PARKING BRAKE CABLE CONNECTION
7. SPEED SENSOR CONNECTION <VEHICLES WITH ABS>
8. BRAKE HOSE AND TUBE CONNECTION
9. SPRING SUPPORT
10. BREATHER HOSE

<<B>> >>B<< 11. PROPELLER SHAFT

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REMOVAL STEPS (Continued)

<<C>> >>A<< 12. STABILIZER BAR MOUNTING BOLT
13. LOWER ARM
14. LATERAL ROD
<<B>> 15. SHOCK ABSORBER MOUNTING BOLT (LOWER SIDE ONLY)
<<D>> 16. AXLE ASSEMBLY
17. COIL SPRING
18. STABILIZER BAR

REMOVAL SERVICE POINTS

<<A>> CALIPER ASSEMBLY REMOVAL

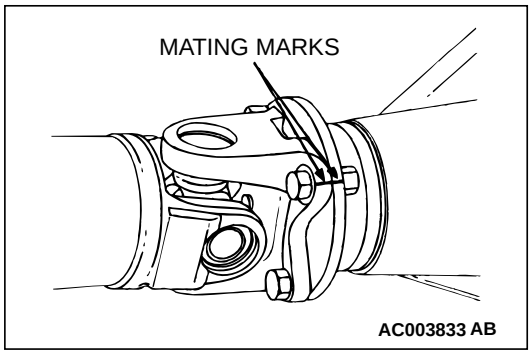
Secure the removed caliper assembly with wire to prevent it from falling off.

<<B>> PROPELLER SHAFT REMOVAL

⚠ CAUTION

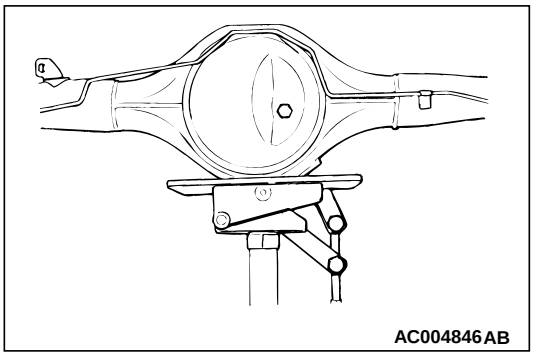
Suspend the propeller shaft from the body with wire, etc. to prevent it from falling.

Place mating marks on the companion flange and flange yoke. Disconnect the propeller shaft from the companion flange.



<<C>> STABILIZER BAR MOUNTING BOLT REMOVAL

Support the axle housing with a jack before removing the stabilizer bar mounting bolt.



<<D>> AXLE ASSEMBLY REMOVAL

⚠ WARNING

Secure the axle assembly to the jack or equivalent. The axle assembly is heavy and unstable and may fall causing damage to the assembly, surrounding equipment, or injuring the installer.

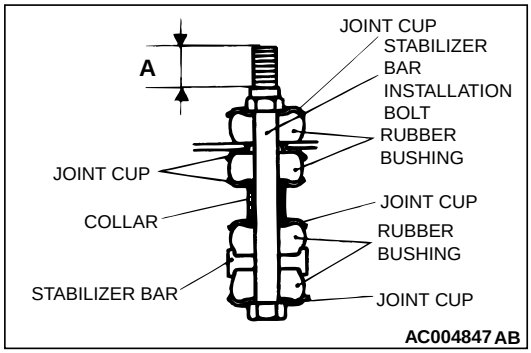
Take out the axle assembly from the rear of the vehicle.

INSTALLATION SERVICE POINTS

>>A<< STABILIZER BAR MOUNTING BOLT INSTALLATION

When installing the stabilizer bar to the stabilizer bar bracket, check that the amount of projection of the stabilizer bar installation bolt is within the standard value range.

Standard value (A): 15 – 17 mm (0.6 – 0.7 inch)



>>B<< PROPELLER SHAFT INSTALLATION

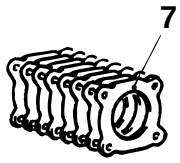
Align the mating marks on the flange yoke and the companion flange to install the propeller shaft.

AXLE SHAFT ASSEMBLY

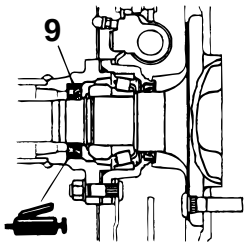
REMOVAL AND INSTALLATION <VEHICLES WITH DRUM BRAKES>

M1271002500115

Pre-removal Operation	Post-installation Operation
• Brake Fluid Draining	• Brake Fluid Filling and Air Bleeding (Refer to GROUP 35A, On-vehicle Service P.35A-22.) • Parking Brake Lever Stroke Adjustment (Refer to GROUP 36, On-vehicle Service P.36-2.)

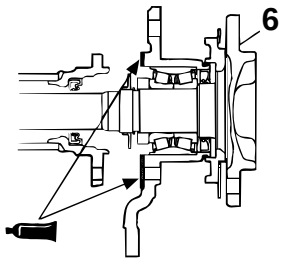


REAR AXLE SHAFT SHIM SET

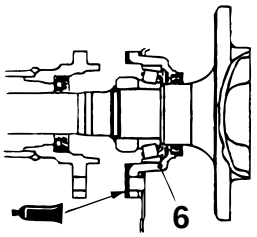


APPLY TO ENTIRE INSIDE DIAMETER OF OIL SEAL LIP

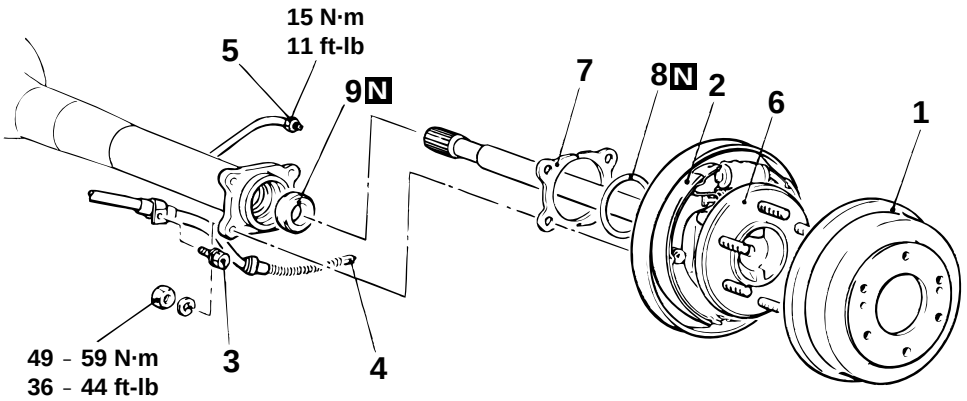
6G74 AND VEHICLES WITH ABS



VEHICLES WITHOUT ABS EXCEPT 6G74



SEALANT: 3M™ AAD PART NO.8672, 8679, 8678, 8661, 8663 OR EQUIVALENT



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REMOVAL STEPS

1. BRAKE DRUM
2. SHOE AND LINING ASSEMBLY (REFER TO GROUP 35A, REAR DRUM BRAKES P.35A-48.)
3. PARKING BRAKE CABLE, SPEED SENSOR CABLE <VEHICLES WITH ABS> ATTACHMENT BOLT
4. PARKING BRAKE CABLE CONNECTION
5. BRAKE TUBE

>>B<< • AXLE SHAFT END PLAY ADJUSTMENT <VEHICLES WITHOUT ABS EXCEPT 6G74>

<<A>> 6. AXLE SHAFT ASSEMBLY

REMOVAL STEPS (Continued)

7. SHIM <VEHICLES WITHOUT ABS EXCEPT 6G74>
8. O-RING

<<B>> >>A<< 9. OIL SEAL

Required Special Tools:

- MB990211: Sliding Hammer
- MB990212: Adapter
- MB990241: Rear Axle Shaft Puller
- MB990930: Installation Adapter
- MB990938: Bar

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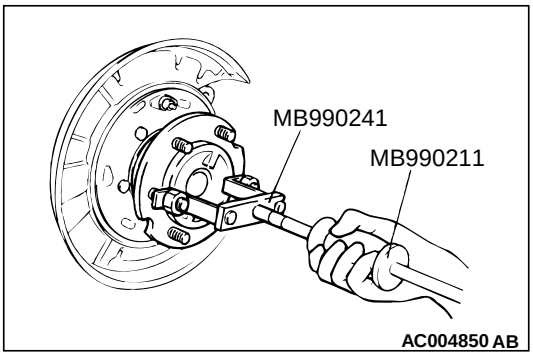
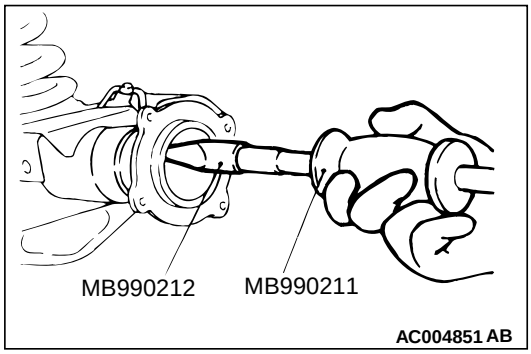
REMOVAL SERVICE POINTS



<<A>> AXLE SHAFT ASSEMBLY REMOVAL

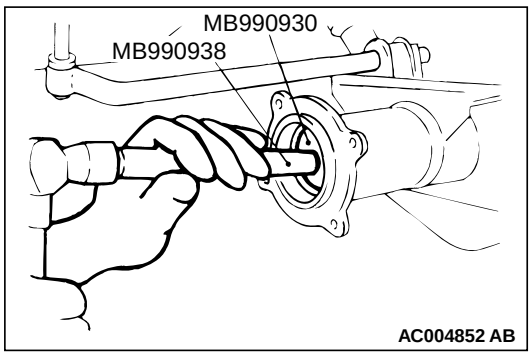
Pull the rear axle shaft from axle housing. If the rear axle shaft is hard to remove, use the special tools MB990211, MB990241.



<<B>> OIL SEAL REMOVAL

Use special tools MB990211, MB990212 with hook attached to remove the oil seal.

INSTALLATION SERVICE POINTS

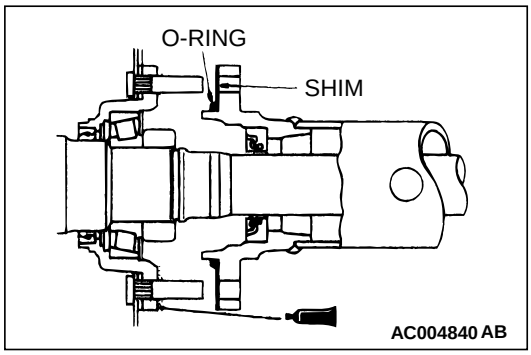


>>A<< OIL SEAL INSTALLATION

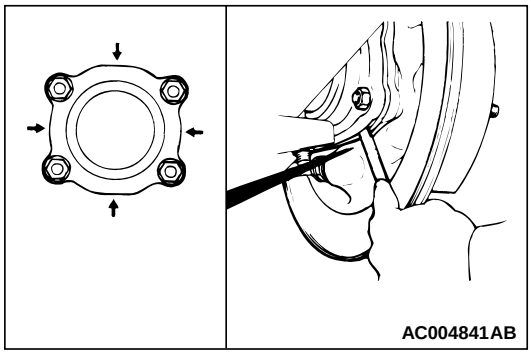
Drive the new oil seal into the rear axle housing end by using the special tools MB990930, MB990938.

>>B<< AXLE SHAFT END PLAY ADJUSTMENT <VEHICLES WITHOUT ABS EXCEPT 6G74>

When removing and reinstalling the axle shaft, end play adjustment is not needed. Re-use the current thickness and number of shims. When replacing the axle shaft or the wheel bearings, the following adjustment is needed.



1. Insert a 1 mm (0.04 inch) thick shim and O-ring into the left side rear axle housing.
2. Apply 3M™ AAD Part Number 8672, 8679, 8678, 8661, 8663 or equivalent to the mating surface of the bearing case, install the left axle shaft into rear axle housing and tighten the nuts to 49 – 59 N·m (36 – 43 ft-lb).
3. Temporarily install the right axle shaft assembly to the axle housing without installing the O-ring or shim.



4. Measure the clearance between the bearing case and rear axle housing end with a feeler gauge.

   NOTE: Confirm that the measurement values do not differ in the horizontal and vertical positions.
5. Select shims of the thickness which is equal to the sum of the measured clearance and 0.05 – 0.20 mm (0.002 – 0.008 inch).

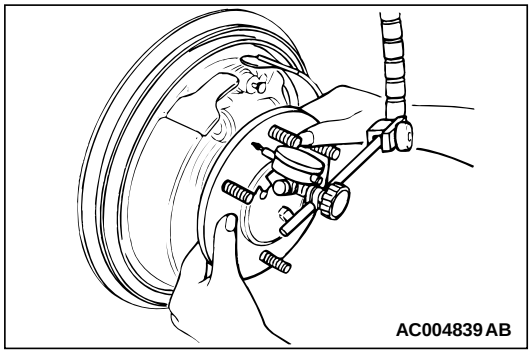
   Example:

   Clearance 1.0 mm (0.04 inch)

   Standard value 0.05 – 0.20 mm (0.002 – 0.008 inch)

   Shim thickness 1.05 – 1.20 mm (0.041 – 0.047 inch)
6. Remove the right axle shaft, and install shim(s) and O-ring on the right side rear axle housing end.
7. Apply 3M™ AAD Part Number 8672, 8679, 8678, 8661, 8663 or equivalent to the mating surface of bearing case, install the right axle shaft into rear axle housing and tighten the nut to 49 – 59 N·m (36 – 44 ft-lb).
8. Check to assure that the axle shaft end play is within the standard value.

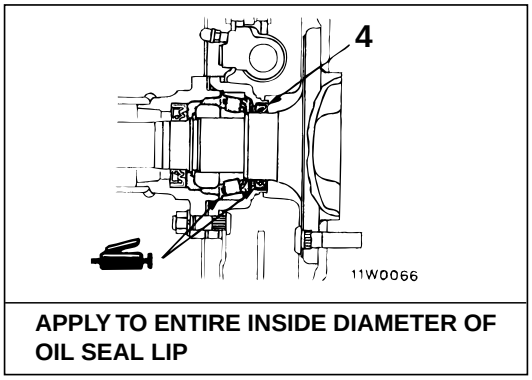
   Standard value: 0.05 – 0.20 mm (0.002 – 0.008 inch)

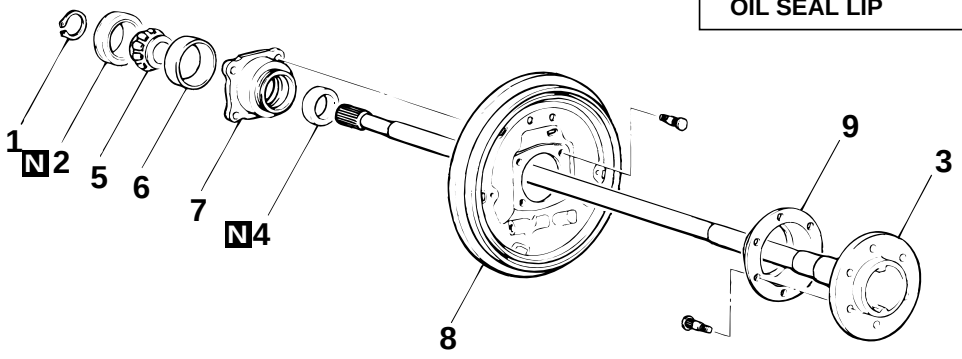


DISASSEMBLY AND ASSEMBLY

M1271002700119

<VEHICLES WITHOUT ABS EXCEPT 6G74>





AC004853 AB

DISASSEMBLY STEPS

	>>F<<	1.	SNAP RING
<<A>>	**>>E<<**	2.	RETAINER
<<B>>		3.	AXLE SHAFT
	>>D<<	4.	OIL SEAL
	>>C<<	5.	BEARING INNER RACE

DISASSEMBLY STEPS (Continued)

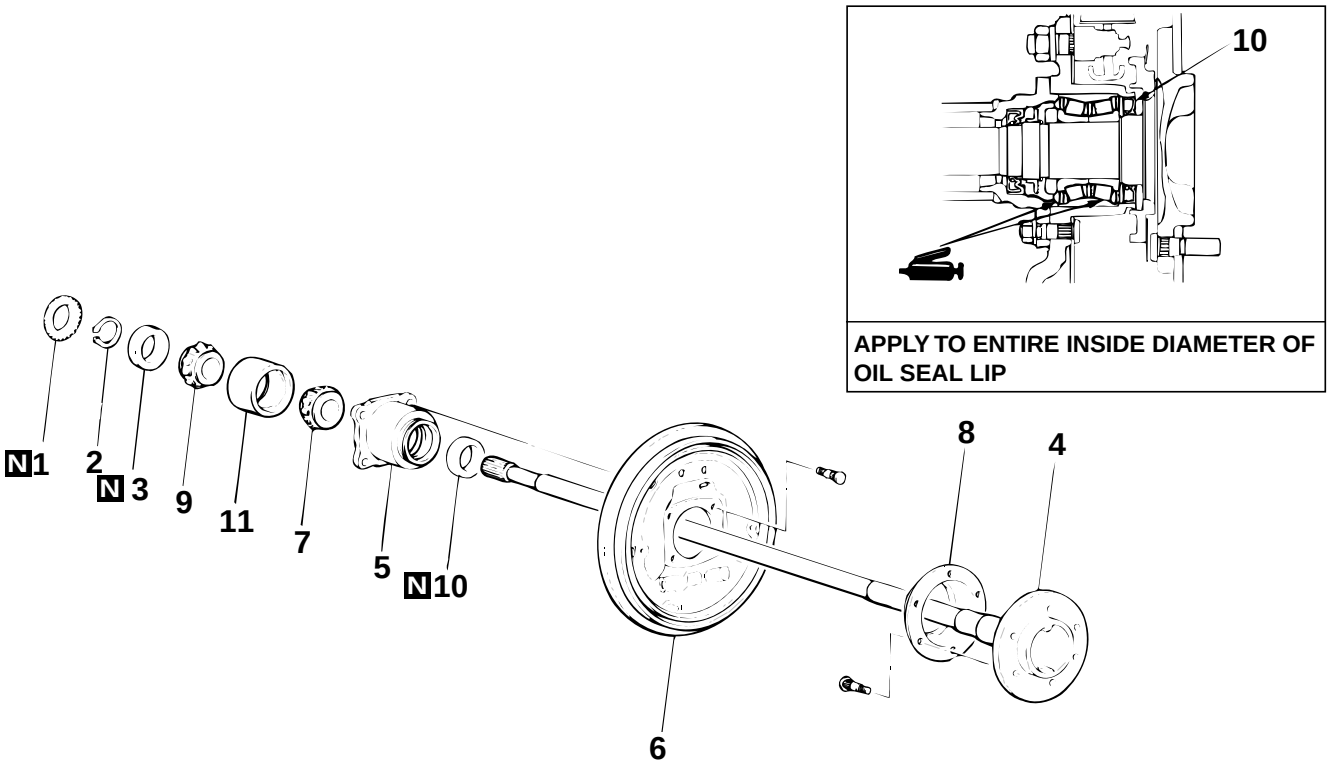
<<D>>	**>>A<<**	6.	BEARING OUTER RACE
		7.	BEARING CASE
		8.	BACKING PLATE
		9.	DUST COVER

Required Special Tools:

- MB990786: Rear Axle Bearing Outer Race Bridge
- MB990799: Bearing Inner Race Installer
- MB990801: Rear Axle Bearing Outer Race Remover
- MB990934: Installation Adapter
- MB990937: Installation Adapter
- MB990938: Bar
- MB991552: Axle Shaft Bearing and Case Remover

TSB Revision

<6G74 and VEHICLES WITH ABS>



AC004854 AB

DISASSEMBLY STEPS

1. ABS ROTOR <VEHICLES WITH ABS>
2. SNAP RING
- **<<A>>** 3. RETAINER
- **<<B>>** 4. AXLE SHAFT
5. BEARING CASE
6. BACKING PLATE
- **<<C>>** 7. OUTER BEARING INNER RACE
8. DUST COVER
9. INNER BEARING INNER RACE
10. OIL SEAL
- **<<D>>** 11. BEARING OUTER RACE

ASSEMBLY STEPS

- **>>A<<** 11. BEARING OUTER RACE
- **>>B<<** 9. INNER BEARING INNER RACE
- **>>B<<** 7. OUTER BEARING INNER RACE
- **>>D<<** 10. OIL SEAL
8. DUST COVER
6. BACKING PLATE
5. BEARING CASE
4. AXLE SHAFT
- **>>E<<** 3. RETAINER
- **>>F<<** 2. SNAP RING
- **>>G<<** 1. ABS ROTOR <VEHICLES WITH ABS>

Required Special Tools:

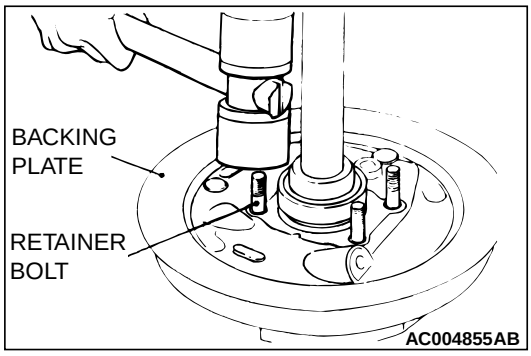
- MB990560: Bearing Remover
- MB990787: Axle Shaft Bearing Remover
- MB990799: Bearing Inner Race Installer
- MB990890 or MB990891: Rear Suspension Bushing Base
- MB990936: Installation Adapter
- MB990938: Bar
- MB991552: Axle Shaft Bearing and Case Remover

TSB Revision

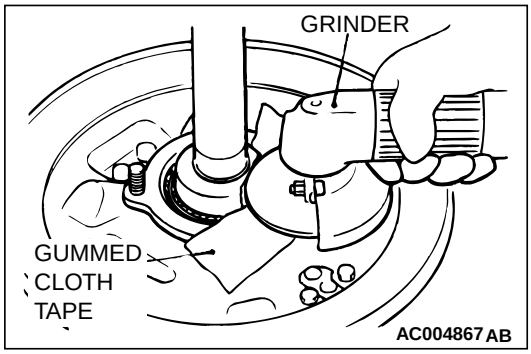
DISASSEMBLY SERVICE POINTS

<<A>> RETAINER REMOVAL

1. Remove one retainer bolt from the backing plate.



2. Apply gummed cloth tape around the edge of the bearing case for protection.



⚠ CAUTION

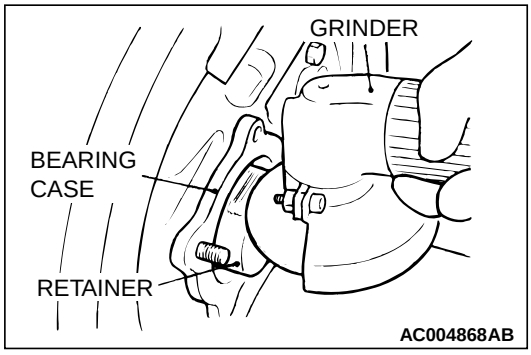
Be careful not to damage the bearing case and the axle shaft.

3. As shown in the figure, hold the axle shaft. Using a grinder, shave off a point of its circumference locally until the wall thickness become as follows:
   - 1.0 – 1.5 mm (0.04 – 0.06 inch) for axle shaft side
   - 2.0 mm (0.08 inch) for bearing side

⚠ CAUTION

Be careful not to damage the bearing case and the axle shaft.

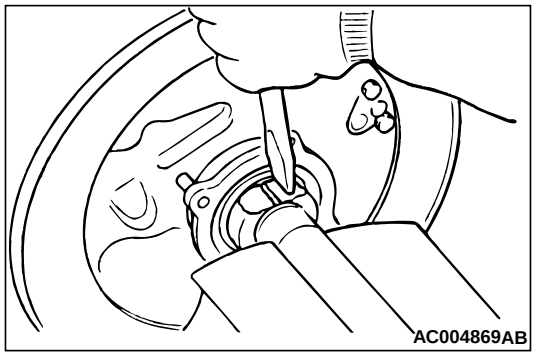
4. Fix the axle shaft and shave off the remaining 2.0 mm (0.08 inch) on the side of the retainer bearing.

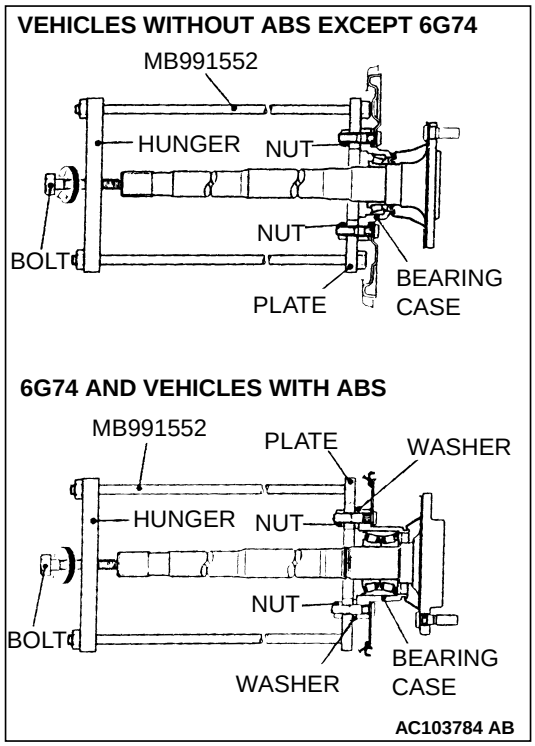


⚠ CAUTION

Be careful not to damage the axle shaft.

5. Cut in with a chisel the place where the retainer ring has been shaven and remove the retainer ring.





<<B>> AXLE SHAFT REMOVAL

<VEHICLES WITHOUT ABS EXCEPT 6G74>

1. Secure special tool MB991552 to the bearing case bolts with the nuts installing the plate and nuts in that order and adjust the height of the hanger.
2. Place the end of the bolt against the center of the axle shaft, and then tighten the bolt to remove the axle shaft from the bearing case assembly.

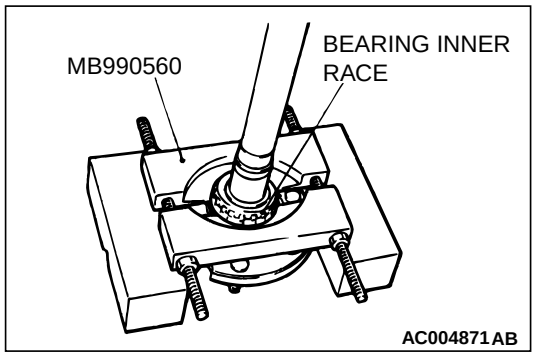
<6G74 and VEHICLES WITH ABS>

⚠ CAUTION

The hanger and plate should be placed so that they are parallel.

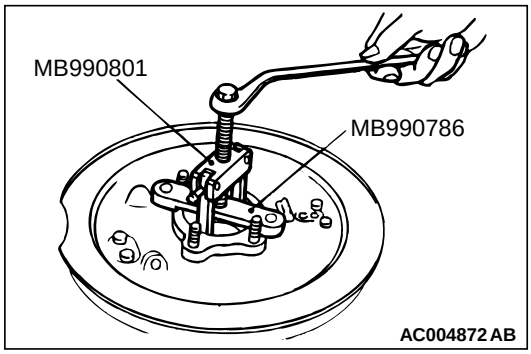
3. Secure special tool MB991552 to the bearing case bolts with the nuts installing the washers, plate and nuts in that order and adjust the height of the hanger.

   NOTE: The washers are used to eliminate the difference in height of the bearing case so that the plate and the bearing case are parallel.
4. Place the end of the bolt against the center of the axle shaft, and then tighten the bolt to remove the axle shaft from the bearing case assembly.



<<C>> OUTER BEARING INNER RACE REMOVAL

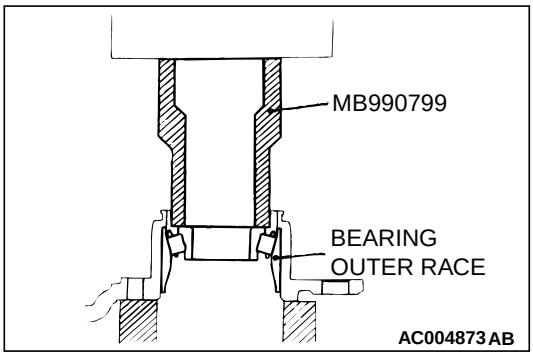
Install special tool MB990560 as shown in the illustration, and then use a press to remove the outer bearing inner race from the axle shaft.



<<D>> BEARING OUTER RACE REMOVAL

<VEHICLES WITHOUT ABS EXCEPT 6G74>

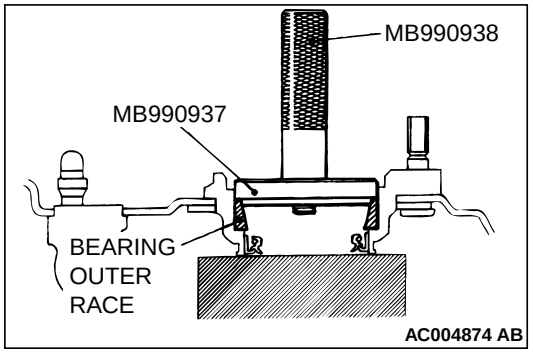
Install special tools MB990786 and MB990801 as shown. Turn the center bolt clockwise to force the bearing outer race out.



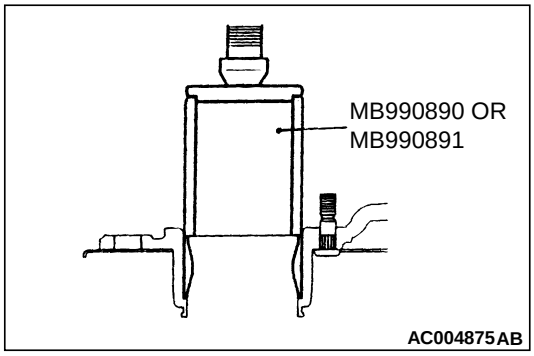
<6G74 and VEHICLES WITH ABS>
Reinstall the outer bearing inner race that was removed previously. Use special tool MB990799 and a press to remove the bearing outer race.

ASSEMBLY SERVICE POINTS

>>A<< BEARING OUTER RACE INSTALLATION

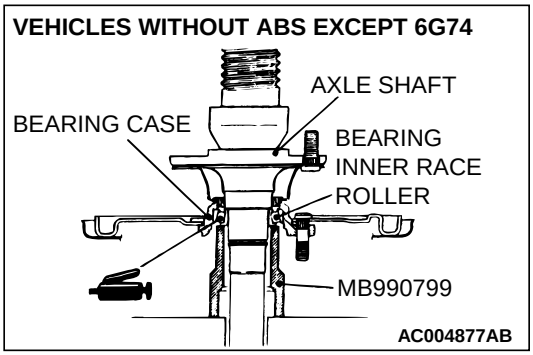


<VEHICLES WITHOUT ABS EXCEPT 6G74>
Use special tools MB990937, MB990938 to press-fit the bearing outer race to the bearing case.



<6G74 and VEHICLES WITH ABS>
Use special tool MB990890 or MB990891 to press-fit the bearing outer race to the bearing case.

>>B<< INNER BEARING INNER RACE/OUTER BEARING INNER RACE INSTALLATION

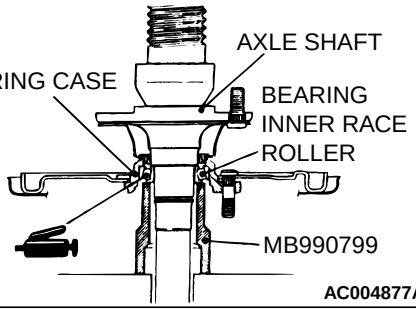


1. Apply multipurpose grease to the roller surface and ends of the bearing.
2. Pass the axle shaft through the bearing case and the inner bearing inner race and outer bearing inner race.

⚠ CAUTION
Both the inner bearing inner race and outer bearing inner race should be press-fitted together.

3. Use special tool MB990799 to press-fit the inner bearing inner race and outer bearing inner race to the axle shaft.

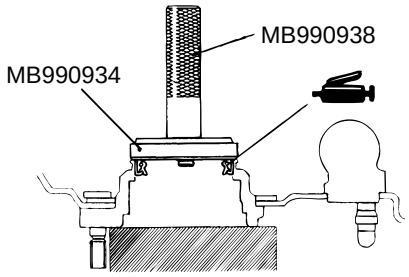
VEHICLES WITHOUT ABS EXCEPT 6G74



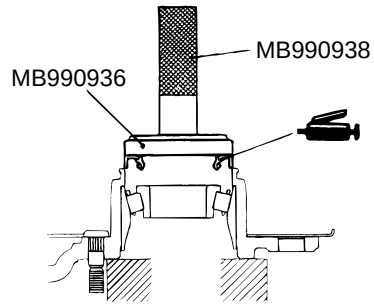
>>C<< BEARING INNER RACE INSTALLATION

1. Apply multipurpose grease to the roller surface and ends of the bearing.
2. Place the bearing case and the bearing inner race onto the axle shaft in that order.
3. Use special tool MB990799 to press-fit the inner bearing inner race and outer bearing inner race to the axle shaft.

VEHICLES WITHOUT ABS EXCEPT 6G74



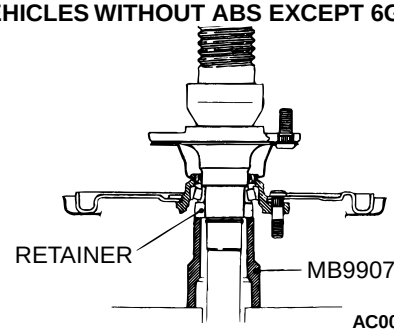
6G74 AND VEHICLES WITH ABS



>>D<< OIL SEAL INSTALLATION

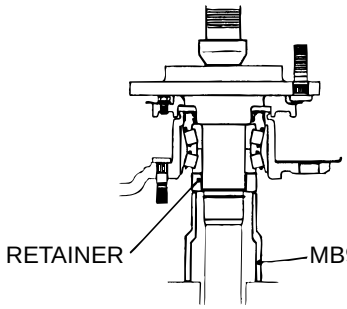
1. Apply multipurpose grease to the external periphery of the oil seal.
2. Press-fit the oil seal into the bearing case until it is flush with the face of the bearing case by using special tools MB990934, MB990936 or MB990938.
3. Apply multipurpose grease to the lips of the oil seal.

VEHICLES WITHOUT ABS EXCEPT 6G74



AC004879 AB

6G74 AND VEHICLES WITH ABS



AC004880 AB

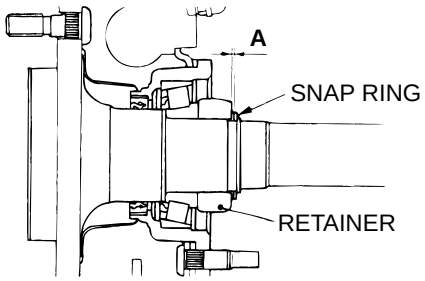
>>E<< RETAINER INSTALLATION

Use special tool MB990799 to press-fit the retainer to the axle shaft. Check that the press-fitting force is at the standard value. If the initial press-fitting force is less that the standard value, replace the axle shaft.

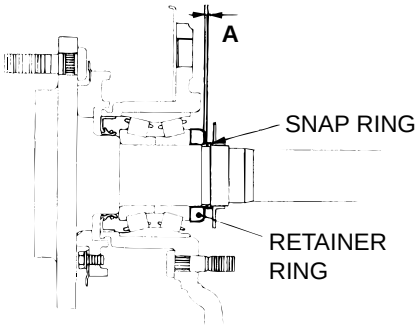
Standard value:

ITEM	INITIAL PRESS-FITTING FORCE N (lb)	FINAL PRESS-FITTING FORCE N (lb)
Vehicles without ABS except 6G74	49,000 (11,016) or more	78,000 (17,536)
6G74 and vehicles with ABS	49,000 (11,016) or more	98,000 – 108,000 (22,032 – 24,281)

VEHICLES WITHOUT ABS EXCEPT 6G74



6G74 AND VEHICLES WITH ABS



AC004881 AB

>>F<< SNAP RING INSTALLATION

1. After installing the snap ring, measure clearance (A) between the snap ring and the retainer with a feeler gauge. Check that it is within the standard value.

   Standard value (A): 0 – 0.166 mm (0 – 0.0065 inch)

2. If the clearance exceeds the standard value, change the snap ring so that the clearance is at the standard value.

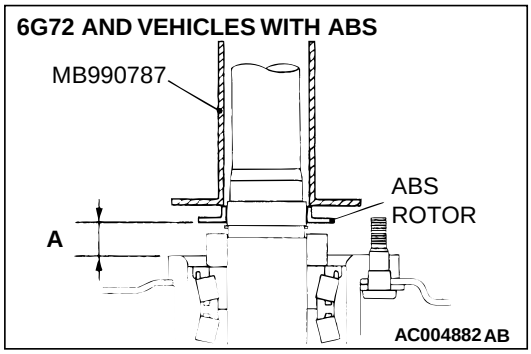
THICKNESS OF SNAP RING mm (in)	IDENTIFICATION COLOR
2.17 (0.085)	–
2.01 (0.079)	Yellow
1.85 (0.073)	Blue
1.69 (0.067)	Purple
1.53 (0.060)	Red

Example:

Clearance 2.0 mm (0.08 inch)

Standard value 0 – 0.166 mm (0 – 0.0065 inch)

Thickness of snap ring 2.01 mm (0.079 inch)



>>G<< ABS ROTOR INSTALLATION

Use special tool MB990787 to press-fit the ABS rotor so that the distance (A) to the bearing case is at the standard value.

Standard value (A): 19.4 – 20.0 mm (0.76 – 0.79 inch)

INSPECTION

M1271002800105

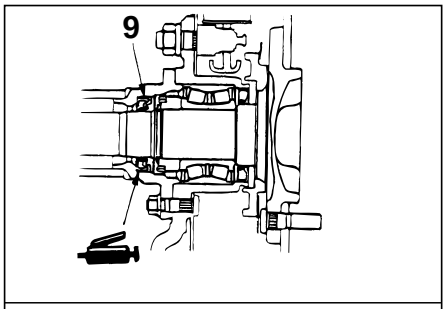
- Check the dust cover for deformation and damage.
- Check the inner and outer bearings for seizure, discoloration and rough raceway surface.
- Check the axle shaft for cracks, wear and damage.

AXLE SHAFT ASSEMBLY

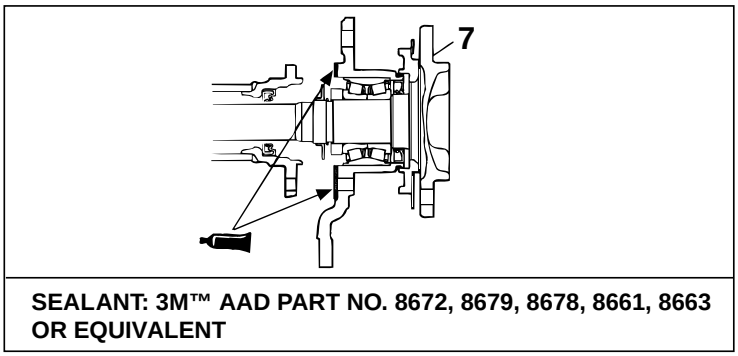
REMOVAL AND INSTALLATION <VEHICLES WITH DISC BRAKES>

M1271002500126

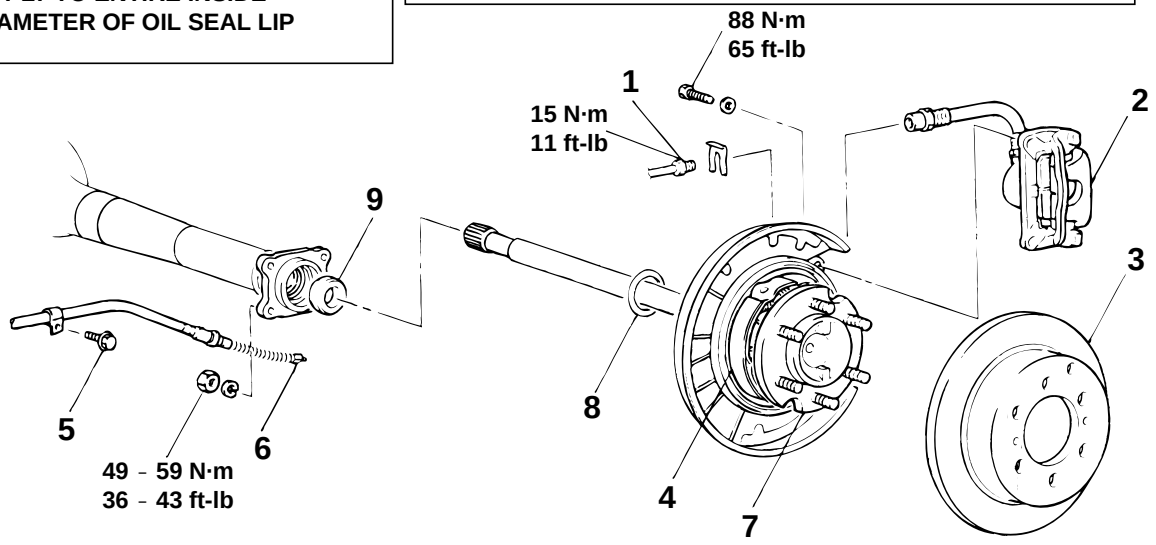
Pre-removal Operation	Post-installation Operation
• Brake Fluid Draining	• Brake Fluid Filling and Air Bleeding (Refer to GROUP 35A, On-vehicle Service P.35A-22.) • Parking Brake Lever Stroke Adjustment (Refer to GROUP 36, On-vehicle Service P.36-2.)



APPLY TO ENTIRE INSIDE DIAMETER OF OIL SEAL LIP



SEALANT: 3M™ AAD PART NO. 8672, 8679, 8678, 8661, 8663 OR EQUIVALENT



AC004892 AC

REMOVAL STEPS
1. BRAKE TUBE
2. CALIPER ASSEMBLY
3. BRAKE DISC
4. PARKING BRAKE SHOE (REFER TO GROUP 36, PARKING BRAKE DRUM P.36-7.)

REMOVAL STEPS (Continued)
5. PARKING BRAKE CABLE AND SPEED SENSOR <VEHICLES WITH ABS> ATTACHING BOLT
6. PARKING BRAKE CABLE

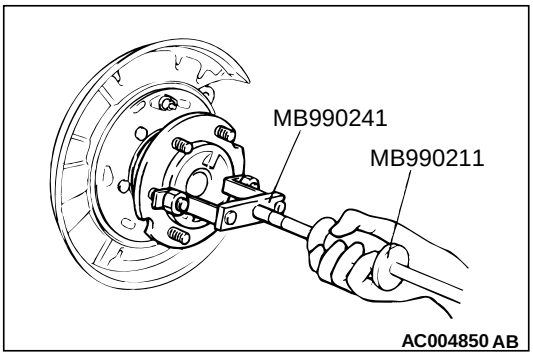
<<A>>
7. AXLE SHAFT ASSEMBLY
8. O-RING

<<B>> >>A<<
9. OIL SEAL

Required Special Tools:
- MB990211: Sliding Hammer
- MB990212: Adapter
- MB990241: Rear Axle Shaft Puller
- MB990930: Installation Adapter
- MB990938: Bar

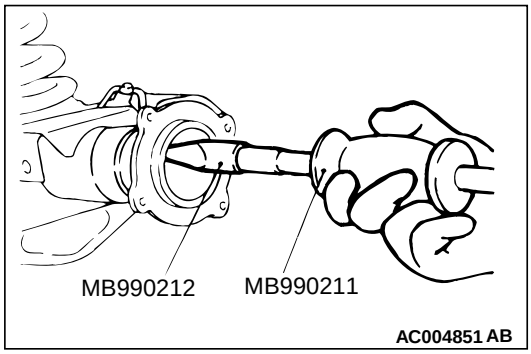
TSB Revision

REMOVAL SERVICE POINTS



<<A>> AXLE SHAFT ASSEMBLY REMOVAL

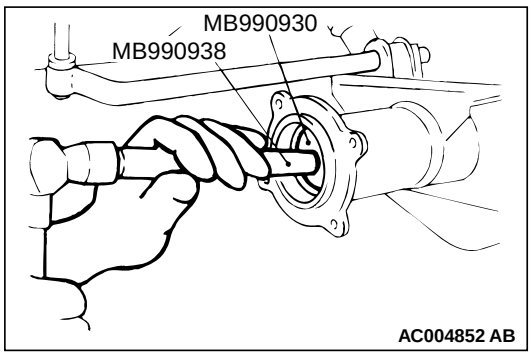
Pull the rear axle shaft from axle housing. If the rear axle shaft is hard to remove, use special tools MB990211, MB990241.



<<B>> OIL SEAL REMOVAL

Use special tools MB990211, MB990212 with hook attached to remove the oil seal.

INSTALLATION SERVICE POINT

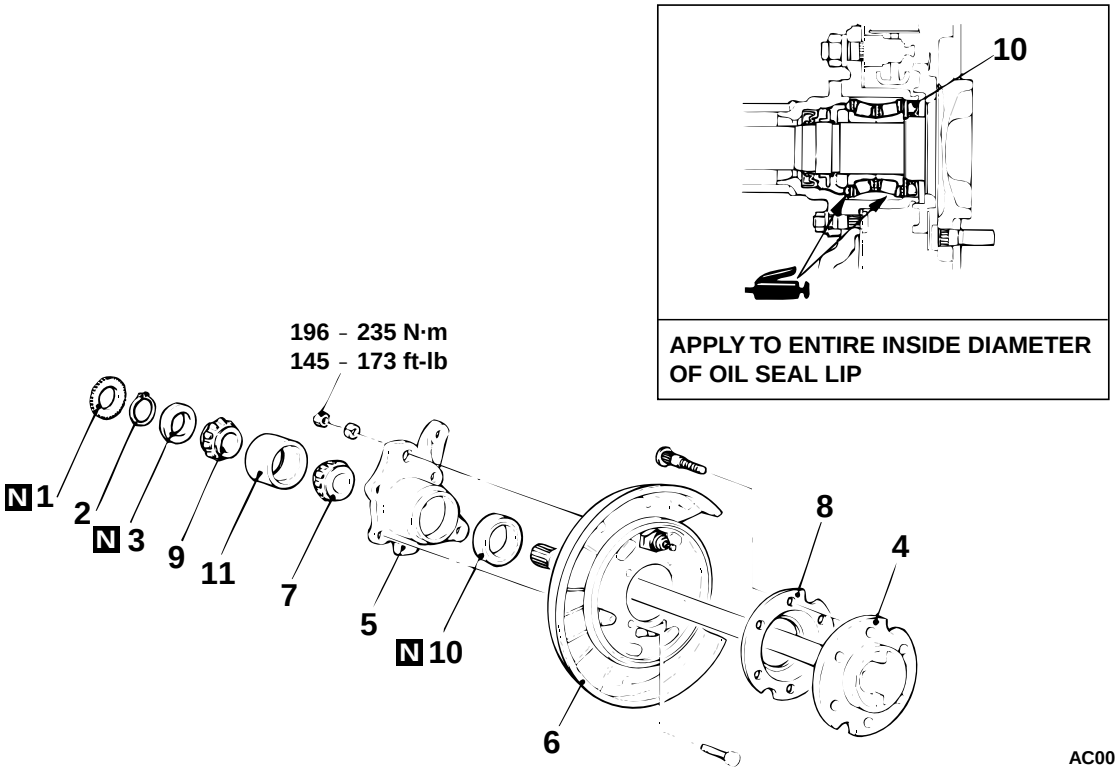


>>A<< OIL SEAL INSTALLATION

Drive the new oil seal into the rear axle housing end by using special tools MB990930, MB990938.

DISASSEMBLY AND ASSEMBLY

M1271002700120



	DISASSEMBLY STEPS
	1. ABS ROTOR <VEHICLES WITH ABS>
	2. SNAP RING
<<A>>	3. RETAINER
<<B>>	4. AXLE SHAFT
	5. BEARING CASE
	6. BACKING PLATE
<<C>>	7. OUTER BEARING INNER RACE
	8. DUST COVER
	9. INNER BEARING INNER RACE
	10. OIL SEAL
<<D>>	11. BEARING OUTER RACE

	ASSEMBLY STEPS
>>A<<	11. BEARING OUTER RACE
>>B<<	9. INNER BEARING INNER RACE
>>B<<	7. OUTER BEARING INNER RACE
>>C<<	10. OIL SEAL
	8. DUST COVER
	6. BACKING PLATE
	5. BEARING CASE
	4. AXLE SHAFT
>>D<<	3. RETAINER
>>E<<	2. SNAP RING
>>F<<	1. ABS ROTOR <VEHICLES WITH ABS>

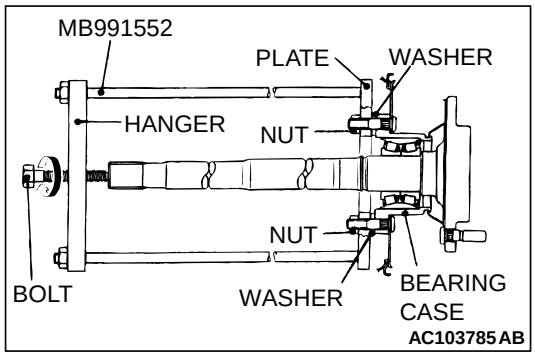
Required Special Tools:

- MB990560: Bearing Remover
- MB990787: Axle Shaft Bearing Remover
- MB990799: Bearing Inner Race Installer
- MB990890 or MB990891: Rear Suspension Bushing Base
- MB990936: Installation Adapter
- MB990938: Bar
- MB991552: Axle Shaft Bearing and Case Remover

DISASSEMBLY SERVICE POINTS

<<A>> RETAINER REMOVAL

Refer to P.27-28.



<<B>> AXLE SHAFT REMOVAL

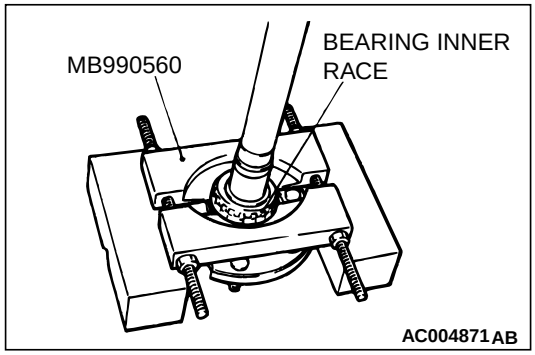
1. Secure special tool MB991552 to the bearing case bolts with the nuts and adjust the height of the hanger. Then install the washers, plate and nuts in that order.

   NOTE: The washers are used to eliminate the difference in height of the bearing case so that the plate and the bearing case are parallel.

⚠ CAUTION

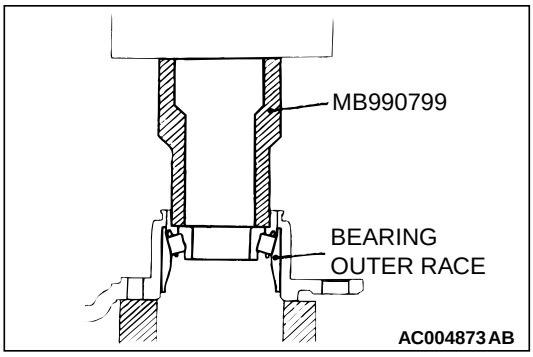
The hanger and plate should be placed so that they are parallel.

2. Place the end of the bolt against the center of the axle shaft, and then tighten the bolt to remove the axle shaft from the bearing case assembly.



<<C>> OUTER BEARING INNER RACE REMOVAL

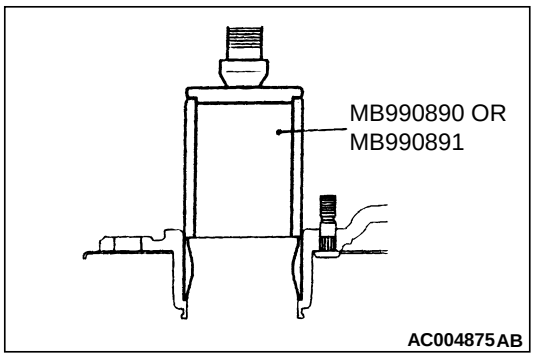
Install special tool MB990560 as shown in the illustration, and then use a press to remove the outer bearing inner race from the axle shaft.



<<D>> BEARING OUTER RACE REMOVAL

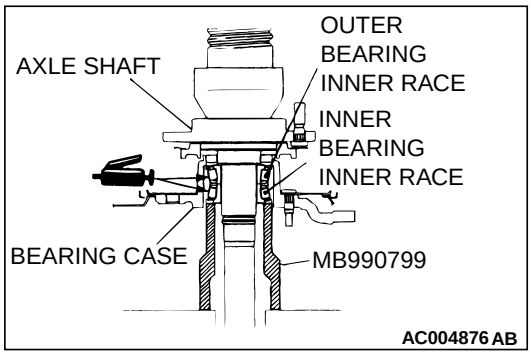
Reinstall the outer bearing inner race that was removed previously. Use special tool MB990799 and a press to remove the bearing outer race.

ASSEMBLY SERVICE POINTS



>>A<< BEARING OUTER RACE INSTALLATION

Use special tool MB990890 or MB990891 to press-fit the bearing outer race to the bearing case.



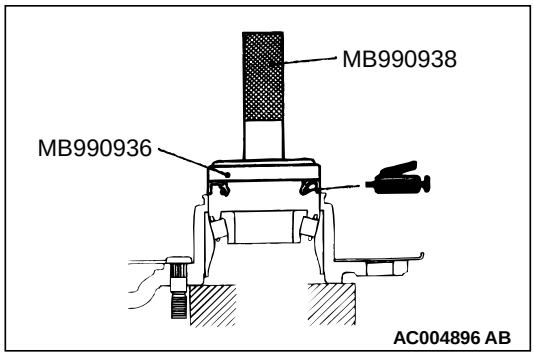
>>B<< INNER BEARING INNER RACE/OUTER BEARING INNER RACE INSTALLATION

1. Apply multipurpose grease to the roller surface and ends of the bearing.
2. Pass the axle shaft through the bearing case and the inner bearing inner race and outer bearing inner race.

⚠ CAUTION

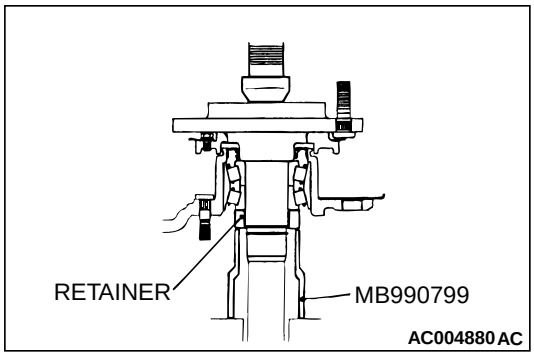
Both the inner bearing inner race and outer bearing inner race should be press-fitted together.

3. Use special tool MB990799 to press-fit the inner bearing inner race and outer bearing inner race to the axle shaft.



>>C<< OIL SEAL INSTALLATION

1. Apply multipurpose grease to the outside of the oil seal.
2. Using special tools MB990936 and MB990938, press-fit the oil seal into the bearing case until it is flush with the face of the bearing case.
3. Apply multipurpose grease to the lips of the oil seal.

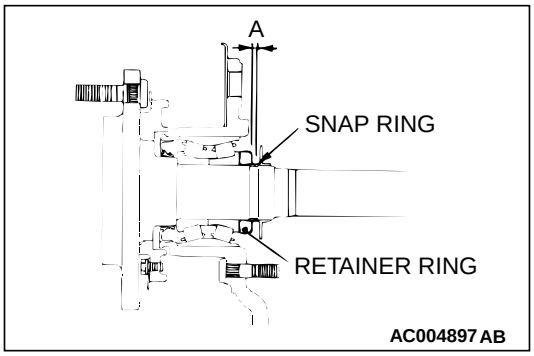


>>D<< RETAINER INSTALLATION

Use special tool MB990799 to press-fit the retainer to the axle shaft. Check that the press-fitting force is at the standard value. If the initial press-fitting force is less that the standard value, replace the axle shaft.

Standard value:

Initial press-fitting force N (lb)	49,000 (11,016) or more
Final press-fitting force N (lb)	98,000 – 108,000 (22,032 – 24,281)



>>E<< SNAP RING INSTALLATION

1. After installing the snap ring, measure clearance (A) between the snap ring and the retainer with a feeler gauge. Check that it is within the standard value.

   Standard value (A): 0 – 0.166 mm (0 – 0.0065 inch)

2. If the clearance exceeds the standard value, change the snap ring so that the clearance is at the standard value.

THICKNESS OF SNAP RING mm (in)	IDENTIFICATION COLOR
2.17 (0.085)	–
2.01 (0.079)	Yellow

THICKNESS OF SNAP RING mm (in)	IDENTIFICATION COLOR
1.85 (0.073)	Blue
1.69 (0.067)	Purple
1.53 (0.060)	Red

Example:

Clearance 2.0 mm (0.08 inch)

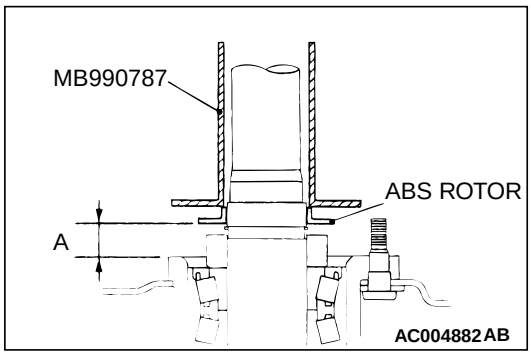
Standard value 0 – 0.166 mm (0 – 0.0065 inch)

Thickness of snap ring 2.01 mm (0.079 inch)

>>F<< ABS ROTOR INSTALLATION

Use special tool MB990787 to press-fit the ABS rotor so that the distance (A) to the bearing case is at the standard value.

Standard value (A): 19.4 – 20.0 mm (0.76 – 0.79 inch)



INSPECTION

M1271002800116

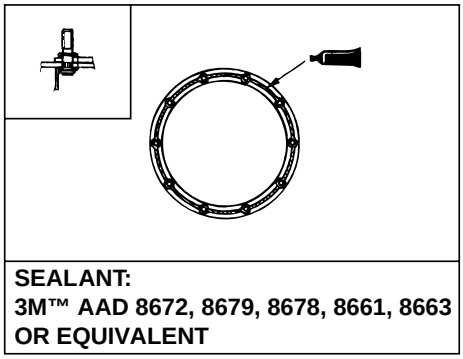
- Check the dust cover for deformation and damage.
- Check the inner and outer bearings for seizure, discoloration and rough raceway surface.
- Check the axle shaft for cracks, wear and damage.

DIFFERENTIAL CARRIER ASSEMBLY

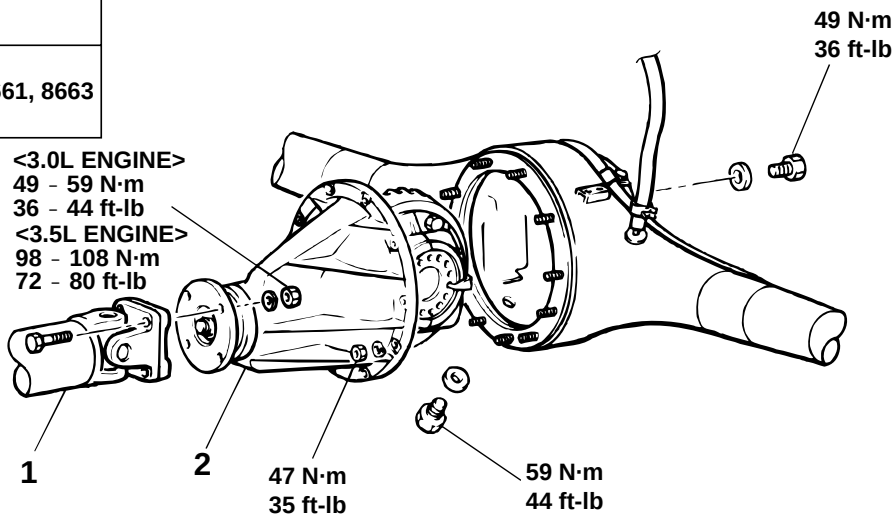
REMOVAL AND INSTALLATION

M1272002000102

Pre-removal Operation	Post-installation Operation
• Differential Gear Oil Draining • Axle Shaft Assembly Removal <Vehicles with drum brakes> (Refer to P.27-25.) <Vehicles with disc brakes> (Refer to P.27-36.)	• Axle Shaft Assembly Installation <Vehicles with drum brakes> (Refer to P.27-25.) <Vehicles with disc brakes> (Refer to P.27-36.) • Differential Gear Oil Filling (Refer to P.27-21.)



SEALANT:
3M™ AAD 8672, 8679, 8678, 8661, 8663 OR EQUIVALENT



AC004903 AC

REMOVAL STEPS

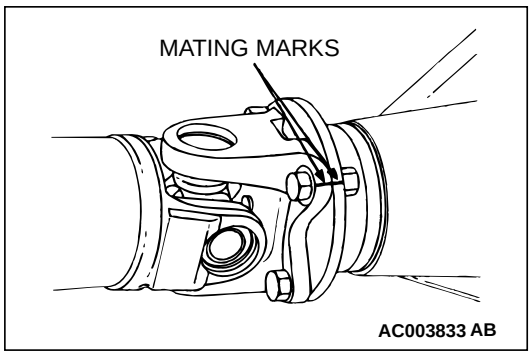
<<A>> >>A<< 1. PROPELLER SHAFT
<<B>> 2. DIFFERENTIAL CARRIER ASSEMBLY

REMOVAL SERVICE POINTS

<<A>> PROPELLER SHAFT REMOVAL

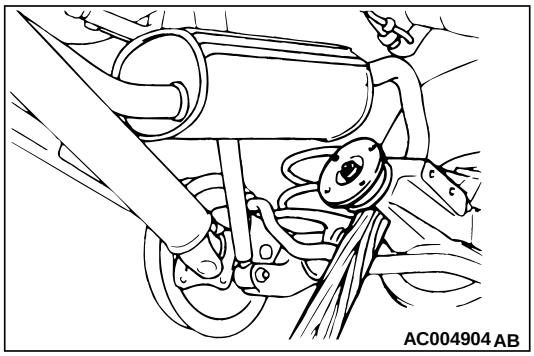
⚠ CAUTION
Suspend the propeller shaft from the body with wire, etc. to avoid spilling transmission fluid and to avoid injury from falling propeller shaft when not secured.

Make the mating marks on the flange yoke of the propeller shaft and the companion flange of the differential case.



AC003833 AB

TSB Revision


AC004904 AB

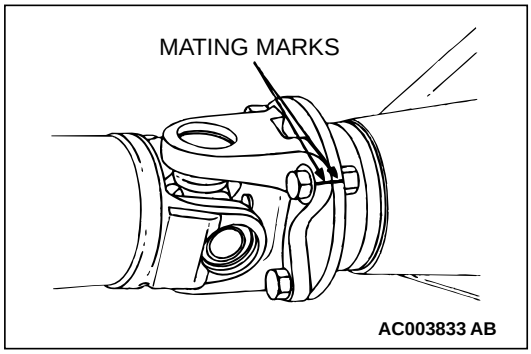
<<B>> DIFFERENTIAL CARRIER REMOVAL

⚠ CAUTION

Use care not to strike the companion flange.

Remove the attaching nuts. Strike the lower part of differential carrier assembly with a piece of wood several times to loosen the assembly. Remove the assembly.

INSTALLATION SERVICE POINT



AC003833 AB

>>A<< PROPELLER SHAFT INSTALLATION

Align the mating marks on the flange yoke and the companion flange to install the propeller shaft.

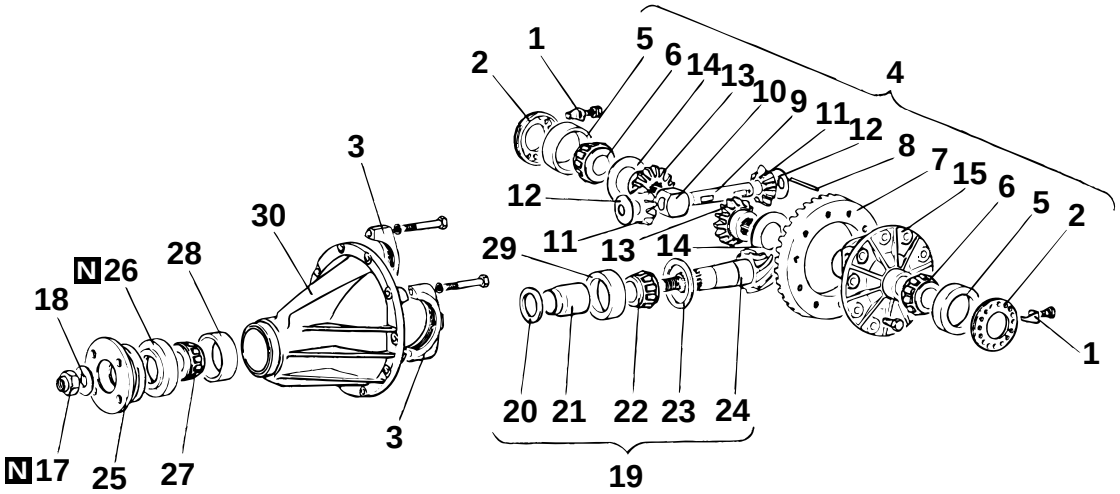
DISASSEMBLY

M1272002200106

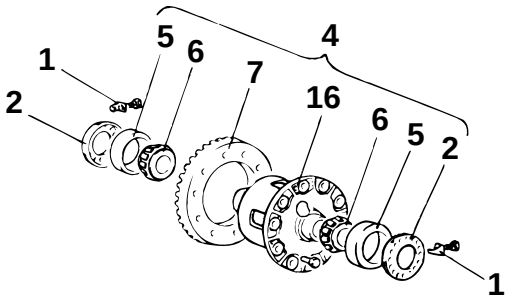
⚠ CAUTION

Do not disassemble the limited slip differential case assembly.

<CONVENTIONAL DIFFERENTIAL>



<LIMITED SLIP DIFFERENTIAL>



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DISASSEMBLY STEPS

- **<<A>>** • INSPECTION BEFORE DISASSEMBLY
- 1. LOCK PLATE
- **<<B>>** 2. SIDE BEARING NUT
- 3. BEARING CAP
- **<<C>>** 4. DIFFERENTIAL CASE ASSEMBLY
- 5. SIDE BEARING OUTER RACE
- **<<D>>** 6. SIDE BEARING INNER RACE
- **<<E>>** 7. DRIVE GEAR
- **<<F>>** 8. LOCK PIN
- 9. PINION SHAFT
- 10. THRUST BLOCK <RWD-VEHICLES WITHOUT ABS EXCEPT 6G74>
- 11. PINION GEAR
- 12. PINION WASHER
- 13. SIDE GEAR
- 14. SIDE GEAR THRUST SPACER
- 15. DIFFERENTIAL CASE
- 16. LIMITED SLIP DIFFERENTIAL CASE ASSEMBLY
- **<<G>>** 17. SELF-LOCKING NUT

DISASSEMBLY STEPS (Continued)

- 18. WASHER
- **<<H>>** 19. DRIVE PINION ASSEMBLY
- 20. DRIVE PINION FRONT SHIM (FOR ADJUSTING PRELOAD OF DRIVE PINION)
- 21. DRIVE PINION SPACER
- **<<I>>** 22. DRIVE PINION REAR BEARING INNER RACE
- 23. DRIVE PINION REAR SHIM (FOR ADJUSTING DRIVE PINION HEIGHT)
- 24. DRIVE PINION
- **<<H>>** 25. COMPANION FLANGE
- **<<J>>** 26. COMPANION FLANGE
- **<<J>>** 27. DRIVE PINION FRONT BEARING INNER RACE
- **<<J>>** 28. DRIVE PINION FRONT BEARING OUTER RACE
- **<<K>>** 29. DRIVE PINION REAR BEARING OUTER RACE
- 30. DIFFERENTIAL CARRIER

TSB Revision

Required Special Tools:
- MB990909: Working base
- MB991116: Adapter
- MB990201: Side Bearing Adjusting Special Spanner
- MB990339: Bearing Puller
- MB990648: Bearing Remover
- MB990810: Side Bearing Puller
- MB990811: Side Bearing Cup
- MB990850: End Yoke Holder
- MB990939: Brass Bar
- MB991367: Special Spanner
- MB991385: Pin
- MB991407: Differential Rear Support Arbor
- MD998801: Bearing Remover

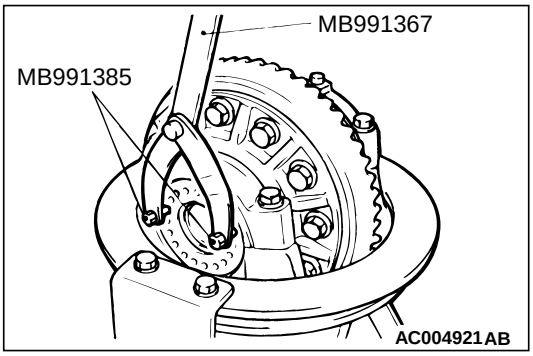
DISASSEMBLY SERVICE POINTS

<<A>> INSPECTION BEFORE DISASSEMBLY

Except for the following standard values, inspection procedure is the same as GROUP 26, inspection before disassembly P.26-38.

DRIVE GEAR BACKLASH
Standard value: 0.13 – 0.18 mm (0.005 – 0.007 in)
DIFFERENTIAL GEAR BACKLASH
Standard value: 0 – 0.076 mm (0 – 0.003 in)

<<B>> SIDE BEARING NUT REMOVAL

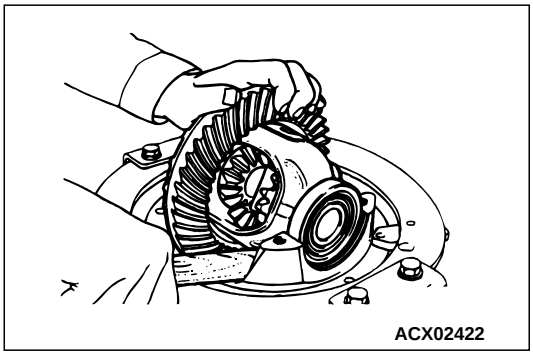


Use special tools MB991367 and MB991385, remove the side bearing nut.

NOTE: Keep the right and left side bearings and side bearing nuts separate, so that they do not become mixed at the time of assembly.

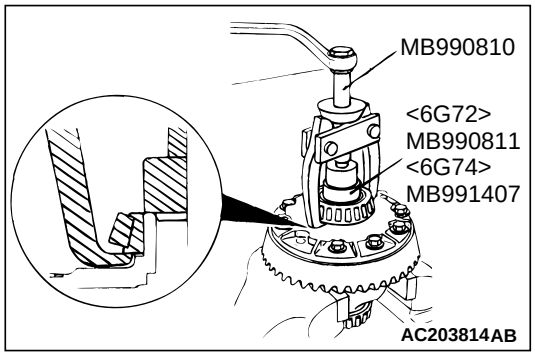
<<C>> DIFFERENTIAL CASE ASSEMBLY REMOVAL

⚠ CAUTION
When taking out the differential case assembly, be careful not to drop and damage the differential side shims or the side bearing outer races.



Use the wooden handle of a hammer to remove the differential case assembly, differential side shims and side bearings.

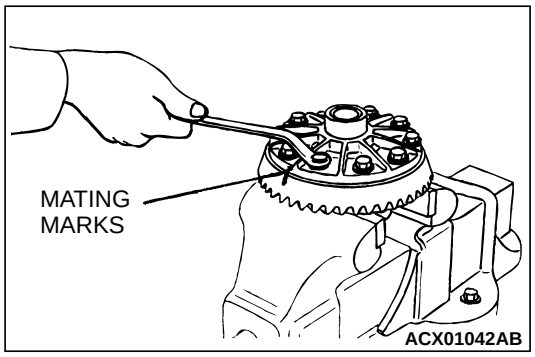
NOTE: Keep the right and left side bearings and side bearing outer race separated, so that they do not become mixed at the time of assembly.



<<D>> SIDE BEARING INNER RACE REMOVAL

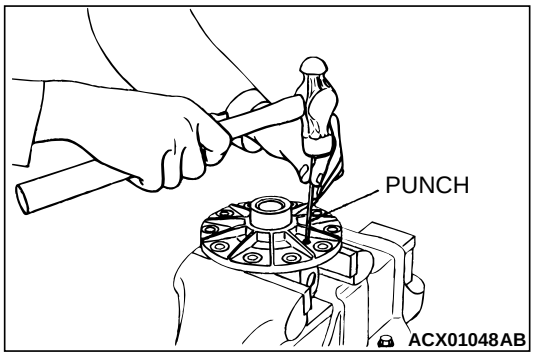
Use special tools MB990810, MB990811 <6G72> and MB991407 <6G74> to pull out the side bearing inner race.

NOTE: Attach the prongs of special tools MB990810, MB990811 <6G72> and MB991407 <6G74> to the inner race of the side bearing through the openings in the differential case.



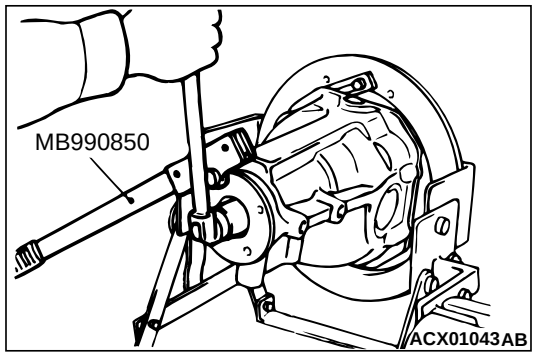
<<E>> DRIVE GEAR REMOVAL

1. Make mating marks to the differential case and the drive gear.
2. Loosen the drive gear attaching bolts in diagonal sequence to remove the drive gear.



<<F>> LOCK PIN REMOVAL

Drive out the lock pin with a punch.



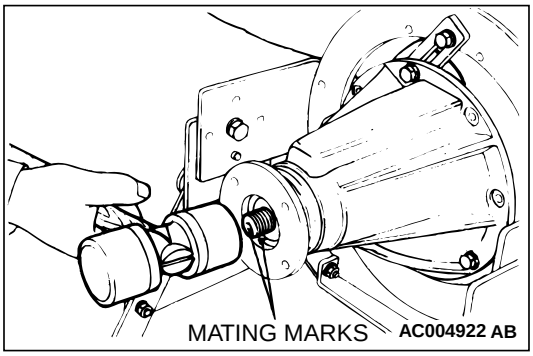
<<G>> SELF-LOCKING NUT REMOVAL

Use special tool MB990850 to hold the companion flange, and then remove the companion flange self-locking nut.

<<H>> DRIVE PINION ASSEMBLY/COMPANION FLANGE REMOVAL

⚠ CAUTION

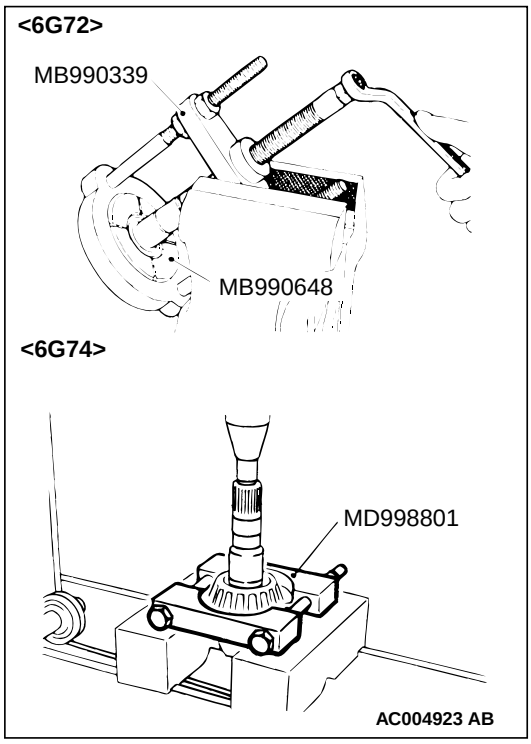
Do not make mating marks on the contact surfaces of the companion flange and propeller shaft.

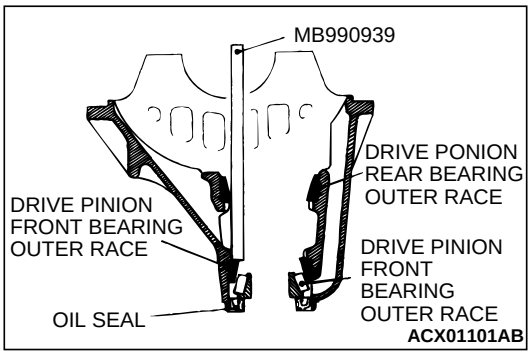


1. Make mating marks to the drive pinion and companion flange.
2. Use special tool MB990810 to pull out the companion flange.

<<I>> DRIVE PINION REAR BEARING INNER RACE REMOVAL

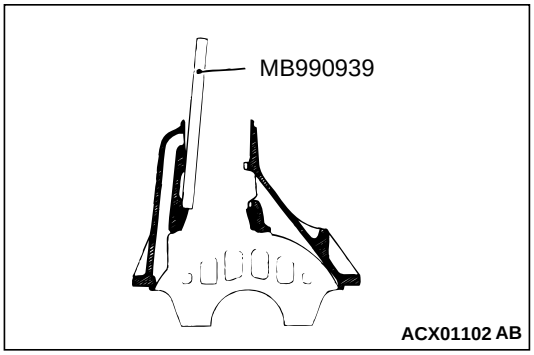
Use special tools MB990339, MB990648 <6G72> or MD998801 <6G74> to pull out the front bearing inner race.





<<J>> OIL SEAL/DRIVE PINION FRONT BEARING INNER RACE/DRIVE PINION FRONT BEARING OUTER RACE REMOVAL

Use special tool MB990939 to remove the drive pinion front bearing outer race.

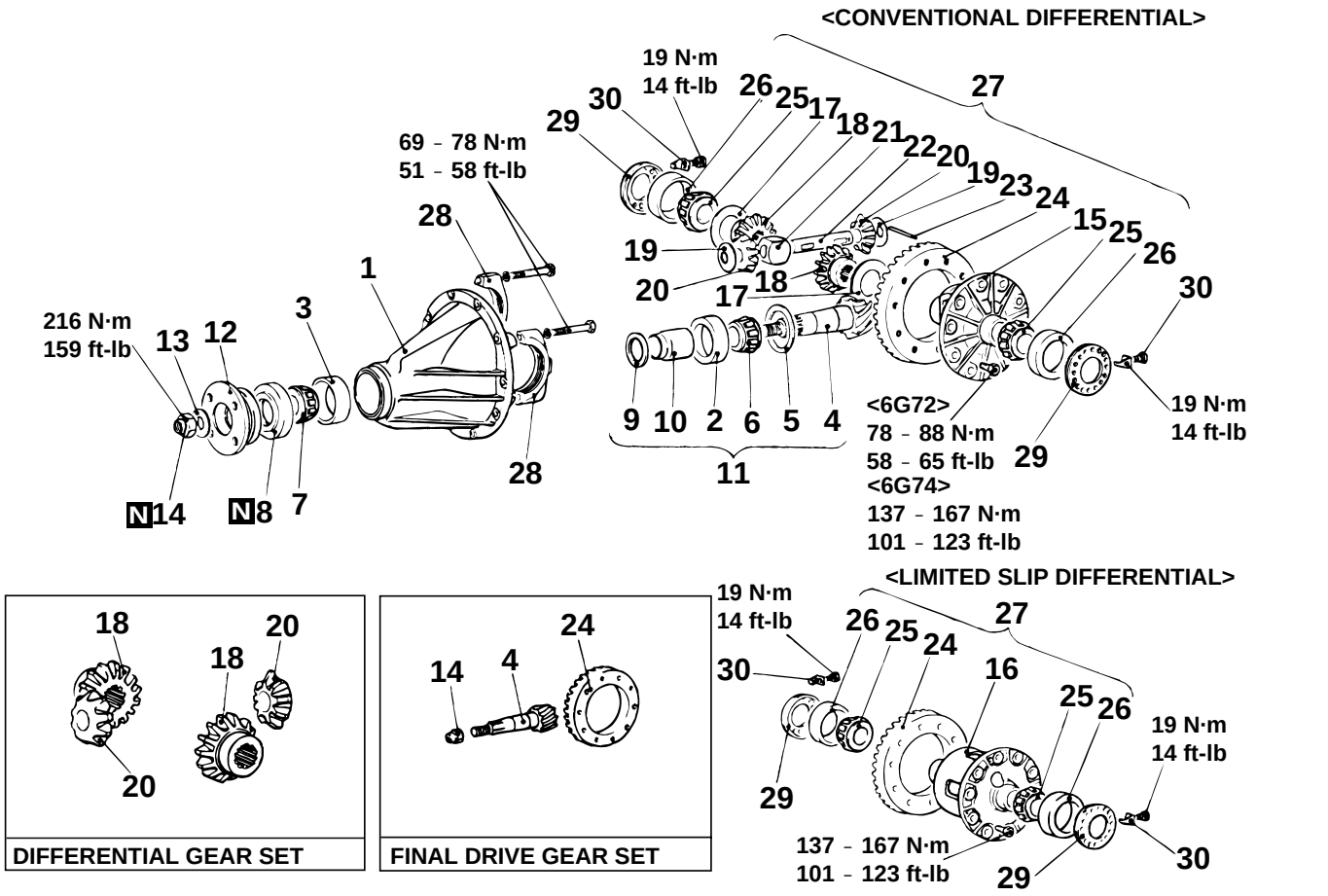


<<K>> DRIVE PINION REAR BEARING OUTER RACE REMOVAL

Use special tool MB990939 to remove the drive pinion rear bearing outer race.

ASSEMBLY

M1272002300114



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ASSEMBLY STEPS

1. DIFFERENTIAL CARRIER
- **>>A<<** 2. DRIVE PINION REAR BEARING OUTER RACE
- **>>B<<** 3. DRIVE PINION FRONT BEARING OUTER RACE
- **>>C<<** • DRIVE PINION HEIGHT ADJUSTMENT
4. DRIVE PINION
5. DRIVE PINION REAR SHIM (FOR ADJUSTING DRIVE PINION HEIGHT)
6. DRIVE PINION REAR BEARING INNER RACE
- **>>D<<** • DRIVE PINION PRELOAD ADJUSTMENT
7. DRIVE PINION FRONT BEARING INNER RACE
- **>>E<<** 8. OIL SEAL
9. DRIVE PINION FRONT SHIM (FOR ADJUSTING DRIVE PINION PRELOAD)
10. DRIVE PINION SPACER
11. DRIVE PINION ASSEMBLY
12. COMPANION FLANGE
13. WASHER

ASSEMBLY STEPS (Continued)

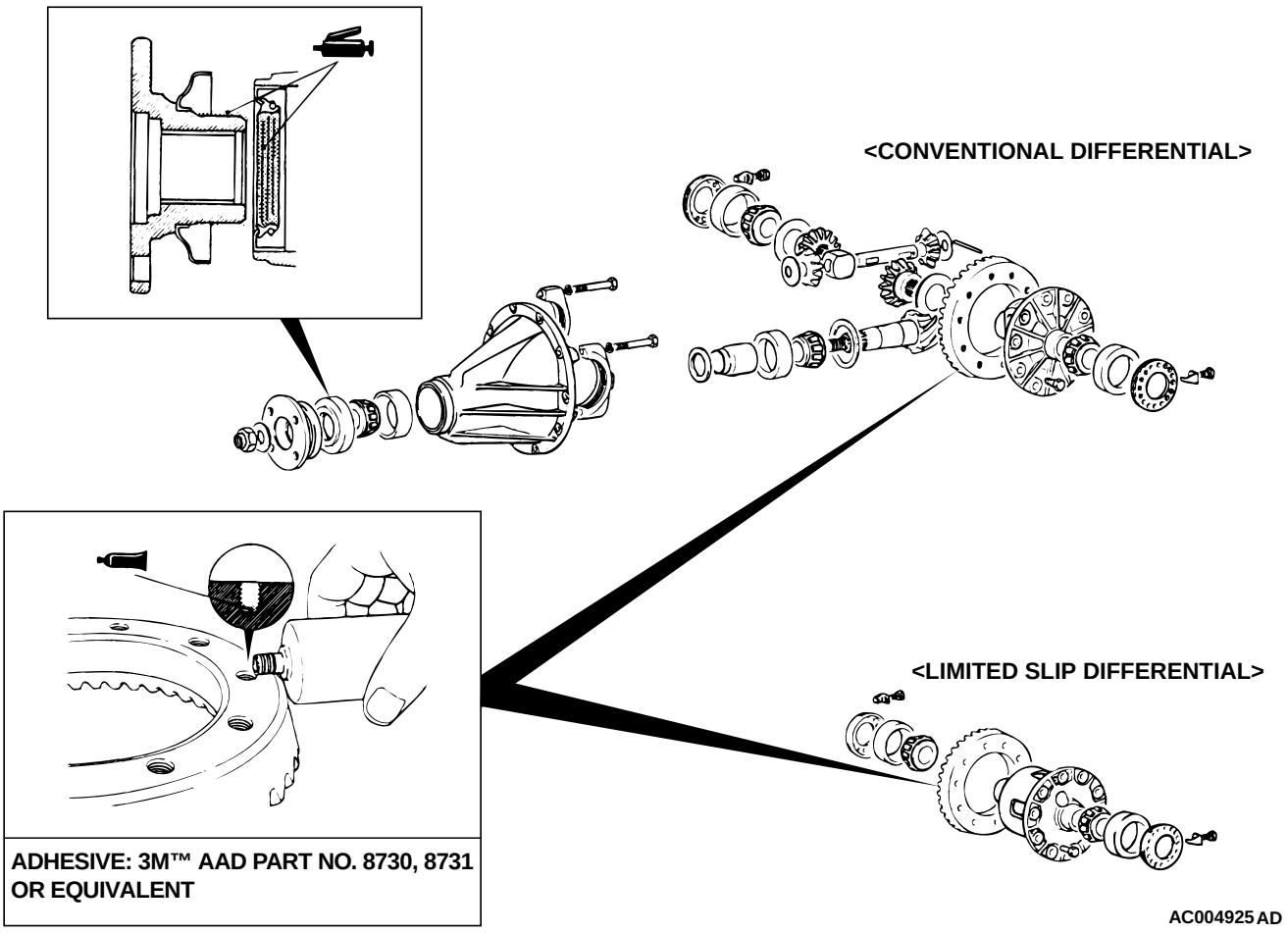
14. SELF-LOCKING NUT
15. DIFFERENTIAL CASE
16. LIMITED SLIP DIFFERENTIAL CASE ASSEMBLY
17. SIDE GEAR THRUST SPACER
18. SIDE GEAR
19. PINION WASHER
20. PINION GEAR
- **>>E<<** • DIFFERENTIAL GEAR BACKLASH ADJUSTMENT
21. THRUST BLOCK <RWD-VEHICLES WITHOUT ABS EXCEPT 6G74>
22. PINION SHAFT
- **>>F<<** 23. LOCK PIN
- **>>G<<** 24. DRIVE GEAR
- **>>H<<** 25. SIDE BEARING INNER RACE
26. SIDE BEARING OUTER RACE
27. DIFFERENTIAL CASE ASSEMBLY
- **>>I<<** 28. BEARING CAP
- **>>J<<** • DRIVE GEAR BACKLASH ADJUSTMENT
29. SIDE BEARING NUT
30. LOCK PLATE

TSB Revision

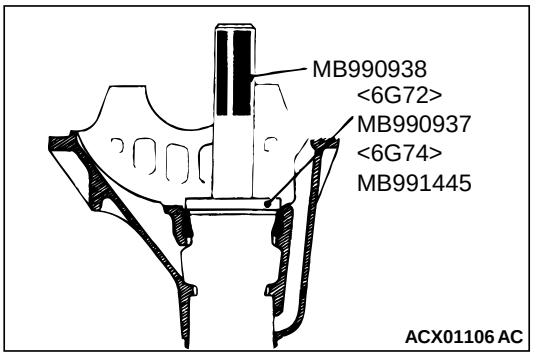
Required Special Tools:

- MB990326: Preload Socket
- MB990685: Torque Wrench
- MB990728: Bearing Installer
- MB990802: Bearing Installer
- MB990819: Drive Pinion Gauge
- MB990850: End Yoke Holder
- MB990934: Installer Adapter
- MB990937: Installer Adapter <6G72>
- MB990938: Bar
- MB991168: Drive Pinion Oil Seal Installer
- MB991169: Drive Pinion Gauge Attachment
- MB991170: Cylinder Gauge
- MB991367: Special Spanner
- MB991385: Pin
- MB991445: Bushing Remover and Installer Base <6G74>
- MB991534: Cylinder Gauge
- MD998812: Installer Cap
- MD998829: Installer Adapter

LUBRICATION AND ADHESIVE POINTS

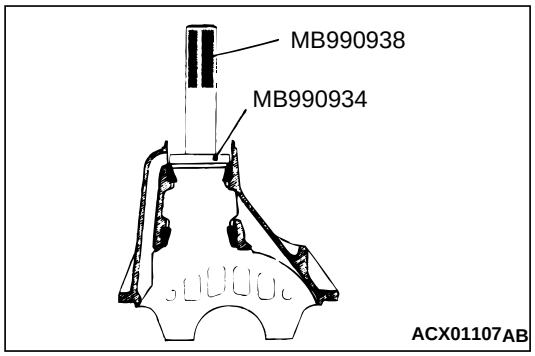


ASSEMBLY SERVICE POINTS



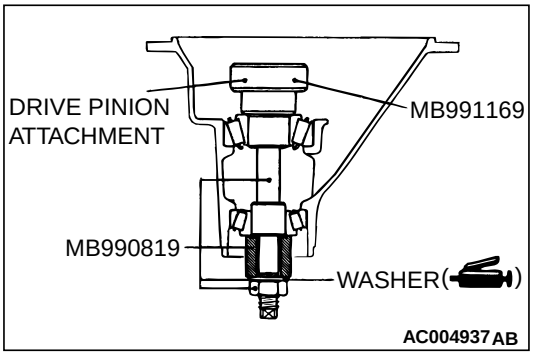
>>A<< DRIVE PINION REAR BEARING OUTER RACE PRESS-FITTING

Use special tools MB990938, MB990937 <6G72>, MB991445 <6G74> to press-fit the drive pinion rear bearing outer races into the gear carrier.



>>B<< DRIVE PINION FRONT BEARING OUTER RACE PRESS-FITTING

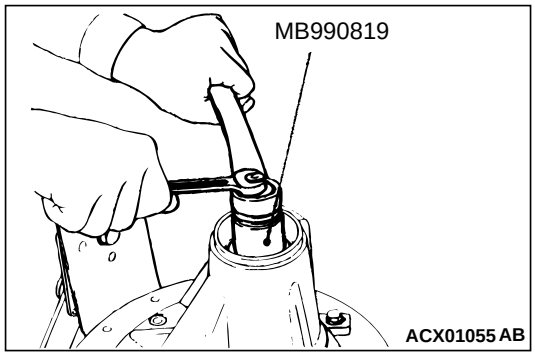
Use special tools MB990938 and MB990934 to press-fit the drive pinion front bearing outer race.



>>C<< DRIVE PINION HEIGHT ADJUSTMENT

Adjust the drive pinion height by the following procedures:

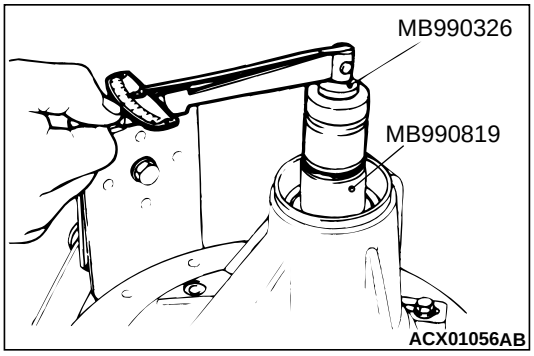
1. Apply multipurpose grease to the washer of special tool MB990819.
2. Install special tool MB990819, MB991169 and drive pinion front and rear bearing inner races to the gear carrier as shown in the illustration.

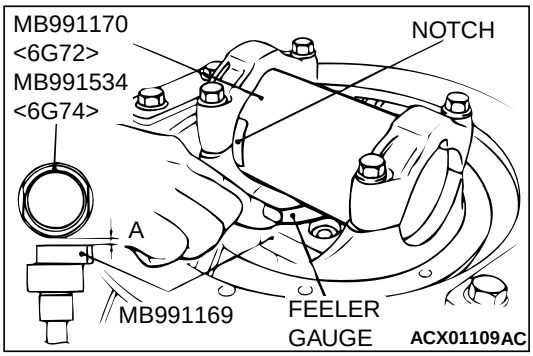


3. Tighten the nut of special tool MB990819 a little at a time while measuring the turning torque of the drive pinion. Then confirm that the turning torque (without the oil seal) is at the standard value.

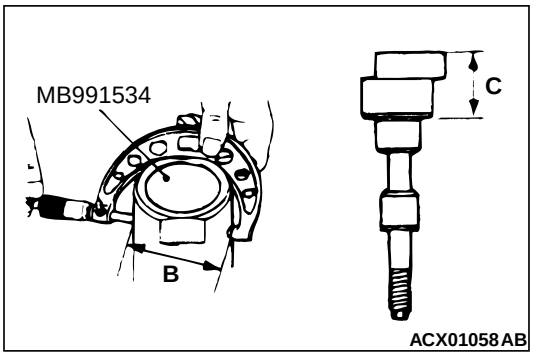
Standard value:

BEARING TYPE	BEARING LUBRICATION	TURNING TORQUE
New	None (with anti-rust agent)	0.6 – 0.9 N·m 5.3 – 8.0 in-lb
New or reuse	Gear oil applied	0.4 – 0.5 N·m 3.5 – 4.4 in-lb

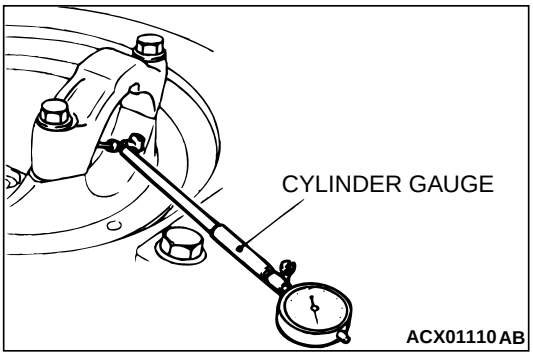




4. Clean the side bearing hub.
5. Place special tool MB991170 <6G72> or MB991534 <6G74> between the side bearing hub of the gear carrier, and position the notch as shown in the illustration. Then tighten side bearing mounting bolt.
6. Use a feeler gauge to measure the clearance (A) between special tools MB991169, MB991170 and MB991534.
7. Remove special tool MB991169.



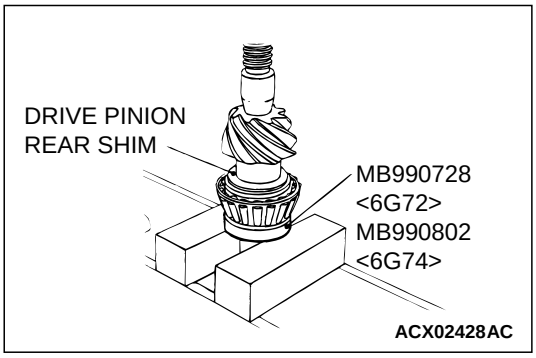
8. Use a micrometer to measure the shown dimensions (B, C) of special tools MB991169, MB991170 and MB991534.



9. Install the bearing cap, and then use a cylinder gauge to measure the inside diameter (D) of the bearing cap.
10. Calculate thickness (F) of the required drive pinion rear shim twice by the following formula. Select a shim which most closely matches this thickness.

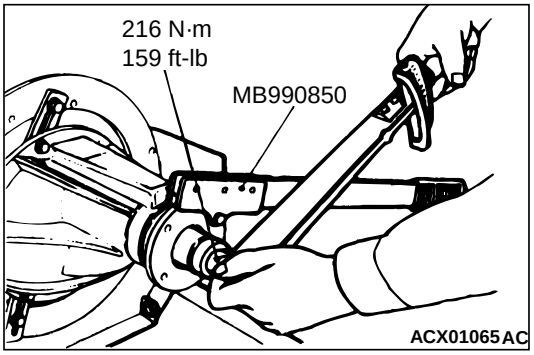
    F = A + B + C – 1/2D – E

    E: <6G72> 115.00 mm (4.527 inches) <6G74> 120.00 mm (4.724 inches)



11. Fit the selected drive pinion rear shim(s) to the drive pinion, and press-fit the drive pinion rear bearing inner race by using special tool MB990728 <6G72> and MB990802 <6G74>.

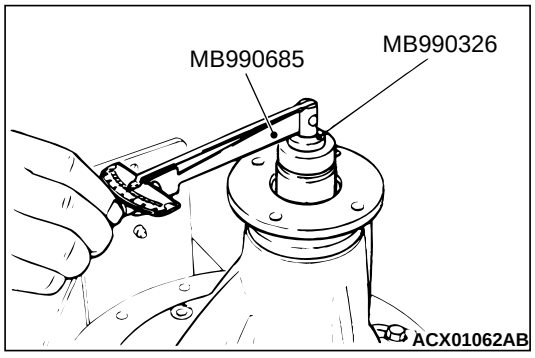
>>D<< DRIVE PINION PRELOAD ADJUSTMENT



1. Insert the drive pinion into the gear carrier, and then install the following parts in sequence from the carrier rear side. Drive pinion spacer, drive pinion front shim and drive pinion front bearing inner race, companion flange.

   NOTE: Do not install the oil seal.
2. Tighten the companion flange to the specified torque by using special tool MB990850.

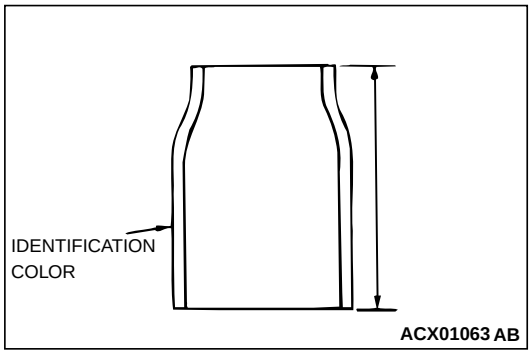
   Tightening torque: 216 N·m (159 ft-lb)



3. Measure the drive pinion turning torque (without the oil seal).

   Standard value:

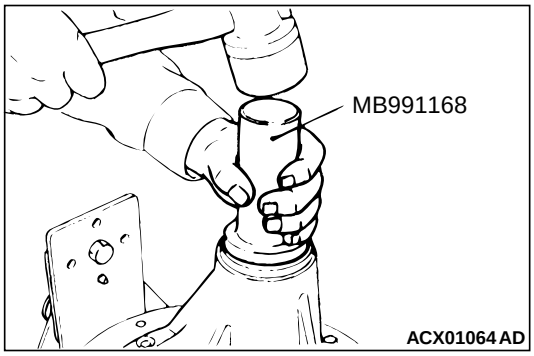
BEARING TYPE	BEARING LUBRICATION	TURNING TORQUE
New	None (with anti-rust agent)	0.6 – 0.9 N·m 5.3 – 8.0 in-lb
New or reuse	Gear oil applied	0.4 – 0.5 N·m 3.5 – 4.4 in-lb



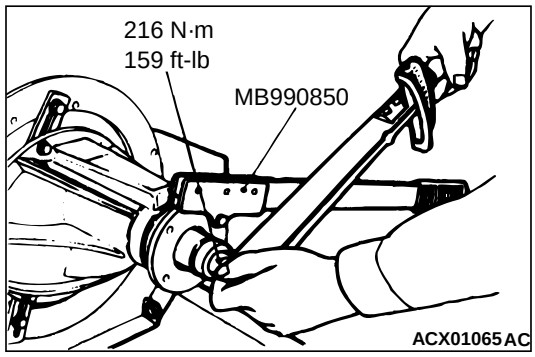
4. If the drive pinion turning torque is not within the standard value, adjust the turning torque by replacing the drive pinion front shim(s) or the drive pinion spacer.

   NOTE: When selecting the drive pinion front shims, if the number of shims is large, reduce the number of shims to a minimum by selecting the drive pinion spacers.
   Also, select the drive pinion spacer from the following two types.

ITEM	HEIGHT OF DRIVE PINION SPACER mm (in)	IDENTIFICATION COLOR
6G72	56.67 (2.231)	–
	57.01 (2.244)	White
6G74	52.50 (2.067)	Yellow
	52.84 (2.080)	Red

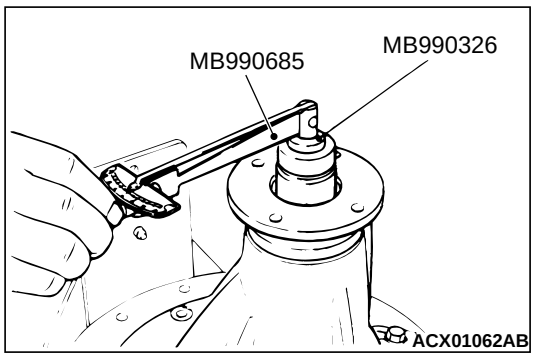


5. Remove the companion flange and drive pinion again. Then insert the drive pinion front bearing inner race into the gear carrier. Use special tool MB991168 to press-fit the oil seal.



6. Install the drive pinion assembly and companion flange with mating marks properly aligned. Tighten the companion flange self-locking nut to the specified torque using special tool MB990850.

   Tightening torque: 216 N·m (159 ft-lb)



7. Measure the drive pinion turning torque (with oil seal) to verify that the drive pinion turning torque complies with the standard value.

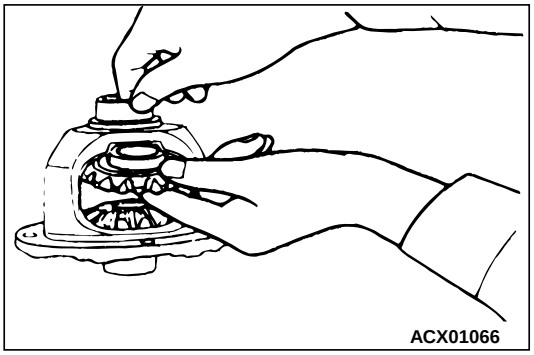
   Standard value:

BEARING DIVISION	COMPANION FLANGE LUBRICATION	TURNING TORQUE
New	None (with anti-rust agent)	0.85 – 1.15 N·m 7.52 – 10.18 in-lb
	Gear oil applied	0.65 – 0.75 N·m 5.75 – 6.64 in-lb

8. If the turning torque is not within the standard value, check the tightening torque of the companion flange self-locking nut, and the installation of the oil seal.

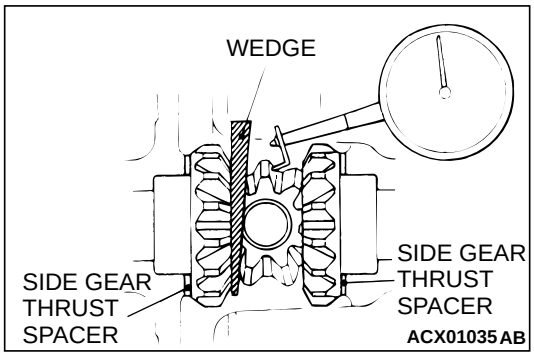
>>E<< DIFFERENTIAL GEAR BACKLASH ADJUSTMENT

Adjust the differential gear backlash by the following procedure:


ACX01066

1. Assemble the side gears, side gear thrust spacers, pinion gears, and pinion washers into the differential case.
2. Temporarily install the pinion shaft.

   NOTE: Do not assemble the thrust block and lock pin yet.

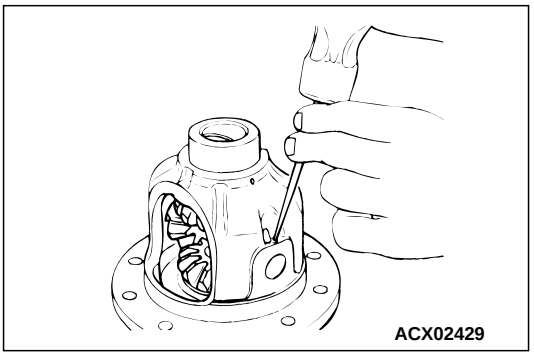


3. Insert a wedge between the side gear and the pinion shaft to lock the side gear.
4. While locking the side gear with the wedge, measure the differential gear backlash with a dial indicator on the pinion gear.

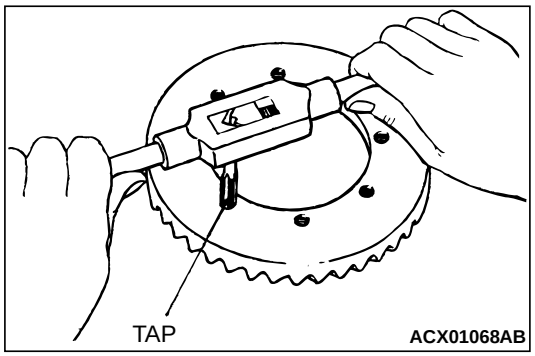
   Standard value: 0 – 0.076 mm (0 – 0.0030 inch)
5. Measure by the same procedure for the other pinion gear.

   Limit: 0.2 mm (0.01 inch)
6. If the backlash exceeds the limit value, replace side bearing adjustment spacers.
7. If adjustment is not possible, replace the side gears and pinion gears as a set.
8. Check that the backlash is within the limit value and that the differential gear turns smoothly.

>>F<< LOCK PIN INSTALLATION

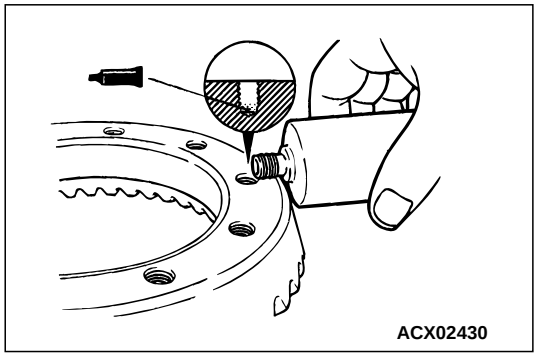

ACX02429

1. Align the pinion shaft lock pin hole with the differential case lock pin hole, and drive in the lock pin.
2. Stake the lock pin with a punch on both sides.



>>G<< DRIVE GEAR INSTALLATION

1. Clean the drive gear attaching bolts.
2. Remove the adhesive adhered to the threaded holes of the drive gear by turning the tap (M10 x 1.25). Clean the threaded holes by applying compressed air.

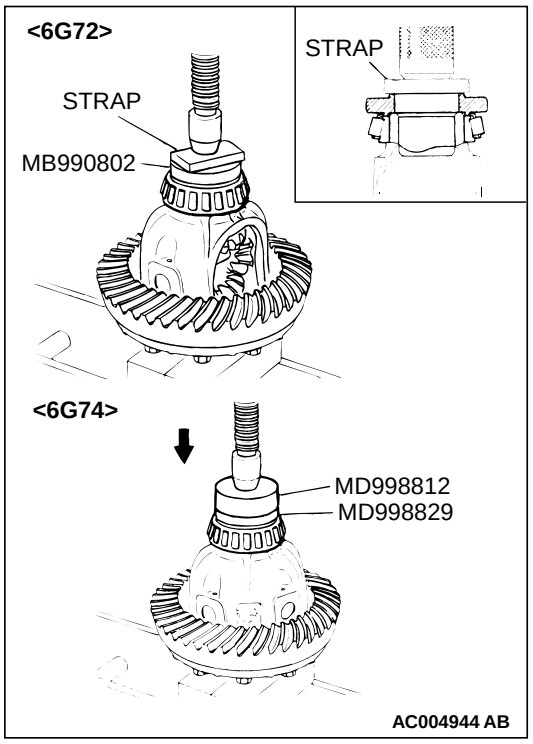


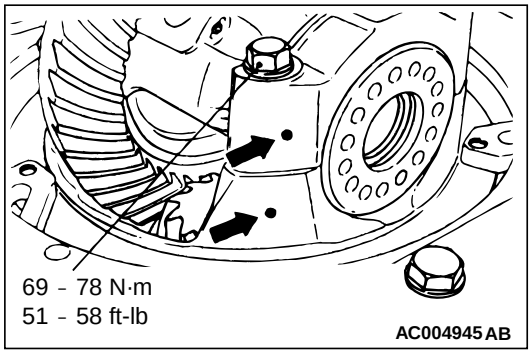
3. Apply 3M™ AAD Part No. 8730, 8731 or equivalent to the threaded holes of the drive gear.
4. Install the drive gear onto the differential case with the mating marks properly aligned. Tighten the bolts to the specified torque in a diagonal sequence.

   Tightening torque:
   <6G72> 78 – 88 N·m (58 – 65 ft-lb)
   <6G74> 137 – 167 N·m (101 – 123 ft-lb)

>>H<< SIDE BEARING INNER RACE INSTALLATION

Use special tool MB990802 <6G72>, MD998812, MD998829 <6G74> to press-fit the side bearing inner races into the differential case.





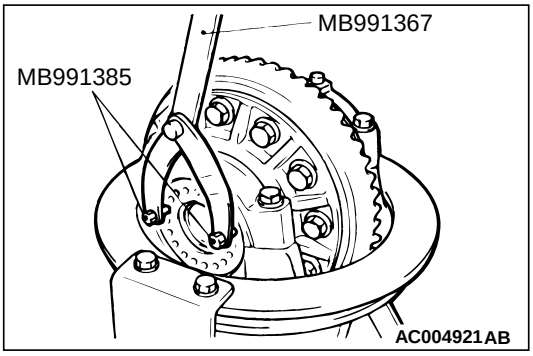
>>I<< BEARING CAP INSTALLATION

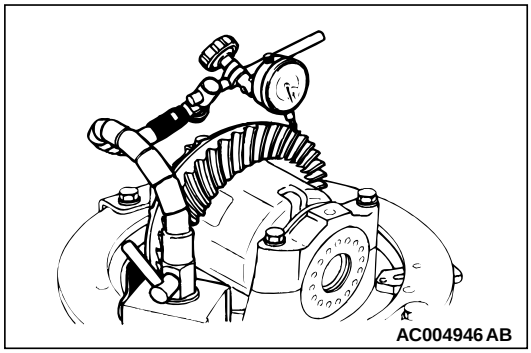
Align the mating marks on the gear carrier and the bearing cap, and then tighten the bearing cap.

>>J<< DRIVE GEAR BACKLASH ADJUSTMENT

Adjust drive gear backlash as follows:

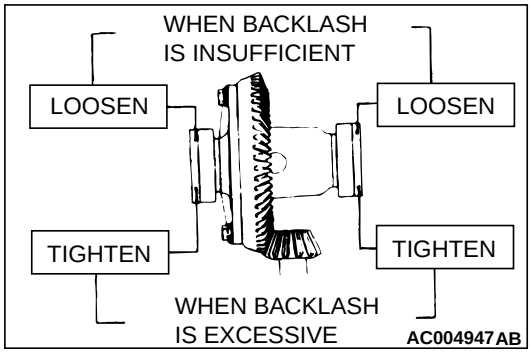
1. Using special tools MB991367 and MB991385, temporarily tighten the side bearing nut to just before preloading of the side bearing.





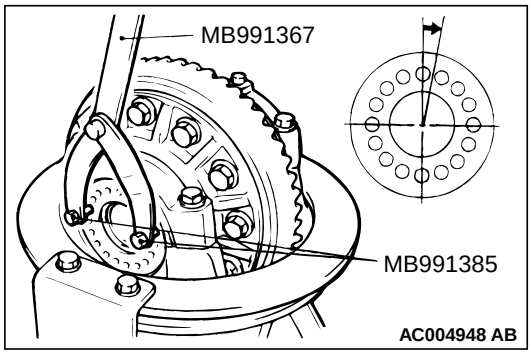
2. Measure the drive gear backlash.

   Standard value: 0.13 – 0.18 mm (0.005 – 0.007 inch)

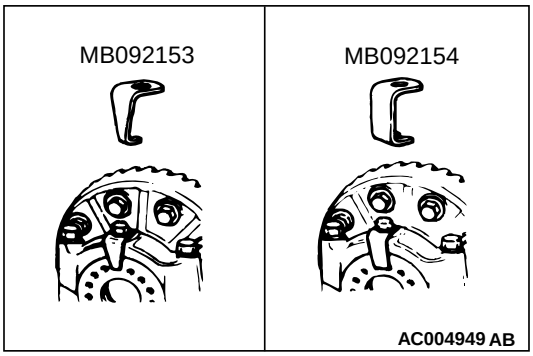


3. Using special tools MB991367, MB991385, adjust the backlash to standard value by moving the side bearing nut as shown.

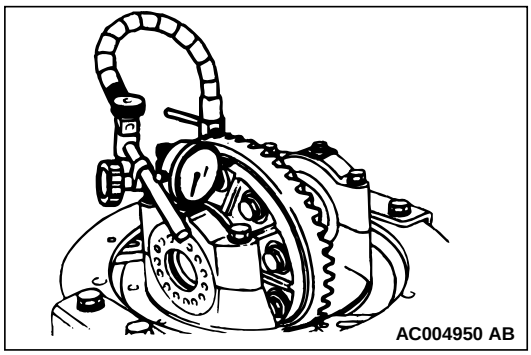
   NOTE: First loosen the side bearing nut then tighten the side bearing nut the same amount as when it was loosened.



4. Using special tools MB991367 and MB991385, apply the preload, turn down both right and left side bearing nuts on half the distance between centers of two neighboring holes.



5. Choose and install the lock plate (two kinds).
6. Check the final drive gear tooth contact. If poor contact is evident, make adjustment. (Refer to GROUP 26, Inspection Before Disassembly P.26-38.)



7. Measure the drive gear runout.
   Limit: 0.05 mm (0.002 inch)
8. When drive gear runout exceeds the limit, remove the differential case and then the drive gears, moving them to different positions and reinstall them.
9. If adjustment is not possible, replace the differential case or drive gear and drive pinion as a set.

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

M1271004000183

ITEM	SPECIFICATION
Axle assembly and backing plate connection nut	49 – 59 N·m (36 – 44 ft-lb)
Bearing cap bolt	69 – 78 N·m (51 – 58 ft-lb)
Bearing case nut	196 – 235 N·m (145 – 173 ft-lb)
Brake tube connection	15 N·m (11 ft-lb)
Caliper assembly bolt	88 N·m (65 ft-lb)
Differential carrier assembly nut	47 N·m (35 ft-lb)
Conventional differential case bolt	<6G72> 78 – 88 N·m (58 – 65 ft-lb) <6G74> 137 – 167 N·m (101 – 123 ft-lb)
Limited slip differential case bolt	137 – 167 N·m (101 – 123 ft-lb)
Drain plug	59 N·m (44 ft-lb)
Drive pinion self-locking nut	216 N·m (159 ft-lb)
Eye bolt	15 N·m (11 ft-lb)
Filler plug	49 N·m (36 ft-lb)
Lock plate bolt	19 N·m (14 ft-lb)
Lower arm bolt assembly	17 N·m (12 ft-lb)
Lower arm nut	216 – 245 N·m (159 – 181 ft-lb)
Rear propeller shaft connection nut	49 – 59 N·m (36 – 44 ft-lb)
Shackle assembly nut	52 N·m (38 ft-lb)
Stabilizer bracket bolt	34 N·m (25 ft-lb)
Spacer bolt	19 N·m (14 ft-lb)
Shock absorber nut (lower)	216 – 245 N·m (159 – 181 ft-lb)

GENERAL SPECIFICATIONS

M1271000200088

ITEM				RWD	4WD
Axle housing type				Banjo type	Banjo type
Axle shaft	Supporting type			Semi-floating type	Semi-floating type
Differential	Reduction gear type			Hypoid gear	Hypoid gear
	Reduction ratio	6G72	Vehicle without wide fender	4.636	4.636
			Vehicle with wide fender	4.900	4.900
		6G74		4.636	4.900
	Pinion gear type			2-pinion	2-pinion

SERVICE SPECIFICATIONS

M1271000300245

ITEM			STANDARD VALUE	LIMIT
Rear axle total backlash mm (in)			–	5 (0.2)
Axle shaft end play mm (in)	Axle shaft end play mm (in)	Vehicles with drum brakes (Vehicles without ABS except 6G74)	0.05 – 0.20 (0.002 – 0.008)	–
		Vehicles with disc brakes or vehicles with drum brakes (6G74 and vehicles with ABS)	0 – 0.25 (0 – 0.010)	–
Protruding length of stabilizer bar mounting bolt mm (in)			15 – 17 (0.6 – 0.7)	–
Press-fitting force of retainer N (lb)	Vehicles with drum brakes (Vehicles without ABS except 6G74)	Initial press-force	49,000 (11,016) or more	–
		Final press-fitting force	78,000 (17,536)	–
	Vehicles with disc brakes or vehicles with drum brakes (6G74 and vehicles with ABS)	Initial press-force	49,000 (11,016) or more	–
		Final press-fitting force	98,000 – 108,000 (22,032 – 24,281)	–
Clearance of snap ring and retainer mm (in)			0 – 0.166 (0 – 0.0065)	–
Distance between bearing case and ABS rotor mm (in)			19.4 – 20.0 (0.76 – 0.79)	–
Final drive gear backlash mm (in)			0.13 – 0.18 (0.005 – 0.007)	–
Drive gear runout mm (in)			–	0.05 (0.002)
Differential gear backlash mm (in)			0 – 0.076 (0 – 0.0030)	0.2 (0.01)
Drive pinion rotation torque N·m (in-lb)	Without oil seal	With anti-rust agent (new)	0.6 – 0.9 (5.3 – 8.0)	–
		With gear oil applied (new or used)	0.4 – 0.5 (3.5 – 4.4)	–
	With oil seal	With anti-rust agent (new)	0.85 – 1.15 (7.52 – 10.18)	–
		With gear oil applied (new or used)	0.65 – 0.75 (5.75 – 6.64)	–

LUBRICANTS

M1271000400101

ITEM	SPECIFIED LUBRICANTS		QUANTITY
Rear differential gear oil	• Conventional differential: Hypoid gear oil API classification GL-5 or higher SAE viscosity No.90, 80W • Limited slip differential: Hypoid gear oil MITSUBISHI Genuine Gear Oil Part No.8149630 EX or equivalent	6G72	2.60 dm^3 (2 3/4 qt)
		6G74	3.2 dm^3 (3.4 qt)

SEALANT AND ADHESIVE

M1271000500119

ITEM	SPECIFIED SEALANT AND ADHESIVE
Bearing case	3M™ AAD Part No. 8672, 8679, 8678, 8661, 8663 or equivalent
Dust cover	
Axle housing (differential carrier mounting part)	
Drive gear and differential case mounting part	3M™ AAD Part No. 8730, 8731 or equivalent

COMPONENT IDENTIFICATION

M1271003800089

SNAP RING

THICKNESS OF SNAP RING mm (in)	IDENTIFICATION COLOR
2.17 (0.085)	
2.01 (0.079)	Yellow
1.85 (0.073)	Blue
1.69 (0.067)	Purple
1.53 (0.060)	Red

DRIVE PINION SPACER

HEIGHT OF DRIVE PINION SPACER mm (in)		IDENTIFICATION COLOR
4G64, 6G72	56.67 (2.231)	–
	57.01 (2.244)	White
6G74	52.50 (2.067)	Yellow
	52.84 (2.080)	Red

NOTES